Administrative Report of the Punjab & Its Dependancies for 1915-16

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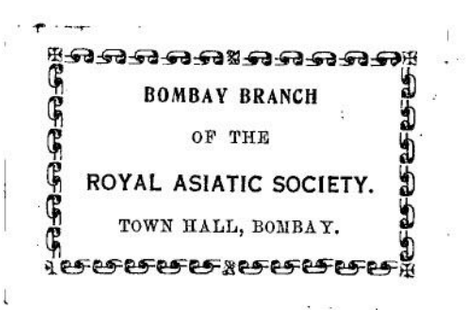

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

134227

1915-16.

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PART I.

GENERAL SUMMARY.

(The "year" throughout this report is not invariably the financial year ending 31st March 1916. At the heading of each chapter, with the exception of chapter I, a reference is given to the departmental reports which contain details of the subjects dealt with. The "year" of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the "year" in chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1916, in chapter II it is the revenue year ending 30th September 1915, and in chapters III and VI it is the calendar year ending 31st December 1915.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.)

CHANGES IN THE ADMINISTRATION.

Personnel.

1. Sir Michael O'Dwyer, K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year under report.

General.

2. The decided success of the arrangements for the systematic inspection of the judicial courts referred to in the last report justified the reappointment of a third temporary Additional Judge for the cold weather of 1915-16. The Government of India sanctioned in August 1915 the retention of the Additional Secretary to Government for a further period of one year.

The Punjab and the War.

3. In the loyalty and patriotism which India displayed during the year in the Great War the Punjab can fairly claim a full share. In normal times it supplies over half the strength of the combatant Indian Army, though its population is only one-twelfth that of British India. And in response to the special appeal for recruits for the War, the same proportion was maintained, the Province furnishing 70,000 out of the 127,000 raised within the Indian Empire by the middle of April 1916. The enthusiasm for recruiting was general, many of the leading men

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taking an active part in encouraging it. All the fighting races, whether in British districts or in the Native States, came forward nobly, and even classes which for generations had given up military service successfully pressed their claim to take part in the defence of the Empire. How well those who went to the front played their part was made clear by the august message of His Imperial Majesty to the Indian troops when leaving France for other theatres of War, from the despatches of the various Commanders in the field testifying to the gallantry and perseverance shown by Punjabi regiments, from the many Military decorations bestowed not only by the British Government but by our French and Russian allies on Indian officers and men for acts of signal bravery, and, finally, from the number of war-worn, wounded or invalided veterans whom the Province welcomed back to their hearths and homes. The proud distinction of being the first Indian to win the Victoria Cross belongs to Naik Khuda Dad Khan of the 129th Baluchis, a resident of Jhelum, and of 9,215 death casualties in the Indian Army (excluding Gurkhas from Nepál) up to 31st March 1916, 5,183 fill to the share of the Punjab.

4. While the spirit of the troops won universal approval, the spirit at home of the people of the Punjab was no less remarkable. Generous gifts were made to the war relief and other funds to procure comforts for the troops in the field, to assist the wounded and invalided while in hospital and to give them a good start on their return to their homes. And, last but not least, the Ruling Chiefs and people of the Province supplied to the Army at the front a fleet of 43 fighting aeroplanes costing nearly 15 *lakhs* of rupees—a generous and practical gift which received august recognition in a message from His Majesty the King Emperor.

5. In 1915 the political situation was regarded as alarming by many people outside the Province. But those who knew the Punjab and the people, while they felt the anxiety which is natural when passing through critical times, saw no cause for alarm. They realised that the disorders caused by the returned revolutionaries and their adherents in the Central Punjab and by bands of ignorant and misguided dacoits in the South-West Punjab were but passing and sporadic manifestations with which the vast majority of the people had no sympathy or concern. They were therefore confident that those disorders would soon be repressed by the united efforts of the administration and the people, and the results of the year show that their hopes were realised more fully and speedily than any one who did not understand the temper and spirit of the people of the Province would have anticipated. The great majority of those who were actually associated with the anarchist movement were brought to justice and met their deserts. A special tribunal constituted under the Defence of India Act, 1915, was employed for nearly a year in dealing with the two great cases known as the Lahore Conspiracy Cases. The procedure prescribed by the Act is framed with the object of securing the speedy administration of justice under very special conditions. Details of the results achieved by the tribunal are given in Part II, and, though at the conclusion of the trials a few of the leaders in the revolutionary conspiracy were still fugitives from justice, their

influence was gone and a dangerous movement had been killed. Apart from those directly implicated in the revolutionary movement, who were dealt with by the courts, a considerable number of returned emigrants suspected of complicity were dealt with under the Ingress Ordinance, but, by the middle of April, 117 who appeared likely to settle down were released conditionally and only 134 remained interned.

6. In November 1915 Sir Michael O'Dwyer personally visited the South-West Punjab, the serious disturbances in which quarter were described in last year's report, and, after hearing statements of their case from the leading representatives of the Hindu and Muhammadan communities, initiated measures as the result of which the Deputy Commissioners of the districts concerned were able to report by the end of the year that all claims on account of lossess ustained in the dacoities had been adjusted and that there appeared to be no likelihood of the recurrence of disorder. A strong body of punitive police was quartered in the affected areas at the cost of those sections of the population who took part in the dacoities, the term of this punitive levy being made dependent on the conduct of the inhabitants, and, in addition, an effective system of watch and ward (*thikri pahra*) was introduced. It may be remarked here that, owing to the steady improvement in the relations between Hindus and Muhammadans, the punitive police force was removed in October 1916.

7. In spite of the special difficulties created by the war, high prices, bad harvests, and other abnormal conditions, the public peace of the province as a whole was well maintained. Murders and riots showed a satisfactory decrease, especially in the north-west of the province. Crimes against property showed an increase on the previous year, especially in the Central districts where organized gangs were at work, but many of them fell into the hands of the police and their removal and the easier prices of food-grains are likely to lead to an improvement. The figures for dacoities continued to give some cause for uneasiness, criminals who formerly operated singly or in small bodies appearing to have learned the value of co-operation. While the administration was not found wanting, reassuring features in connection with these dacoities were the many instances of prompt action on the part of the villagers which led to the capture of several gangs on the scenes of their offences. Government did all in their power to give heart and encouragement to the people. Licenses for arms were freely issued in the disturbed districts, remissions of land revenue amounting to over Rs. 10,000 were granted to 13 villages in various parts of the province, nearly 4,000 acres of land were allotted in the canal colonies to 122 individuals from ten different districts who had shown exceptional pluck and rendered special services to the criminal administration, while money rewards to the value of over Rs. 29,000 were distributed to several hundred persons. Special pensions were also sanctioned for the dependents of those who, whether Government servants or not, have lost their lives in the cause of law and order.

8. The internal administration, though subjected within the last few years to a severe strain, has nowhere shown any signs of breaking

down. In spite of the abnormal conditions, the departments of Government carried on their work steadily and effectively. Many of them, such as the Commission, the Public Works Department, and the Police, surrendered some of their best officers for military service in the field or in the recruiting branches of the army, and two young officers of the Punjab Commission had already at the close of the year died a soldier's death, one in France and the other in Mesopotamia.

Relations with Tributary States.

9. The splendid services of the Punjab States in connection with the war have been already noticed. The Maharaja of Patiála suffered a treble bereavement during the year by the deaths of his infant son, the "Kolgarh" Maharani, and his uncle, the loyal, and well-beloved Raja Sir Ranbir Singh, K.C.S.I. In Baháwalpur the year was marked by administrative progress in many useful directions under the Council of Regency. The young Nawab had an attack of enteric fever while at Murree, but made a satisfactory recovery. A second son was born to the Raja of Faridkot and the new scheme of State administration worked well. In Kapúrthala the conduct of the business of the State, during the Maharaja's absence in Europe and America, was quite satisfactory. Raja Bije Sen of Keonthal died, and Government recognised the succession of his heir Tikka Hamendar Sen, a boy of 13, who is being educated at the Chiefs' College. Tikka Vidyadhar Singh was formally installed as Chief of Kumhársain, and his infant heir died.

Frontier Affairs.

10. A long standing dispute between the Mazari and Drishak tribes about some land on their border was decided by *jirga*, and a feud between sections of the Gurchani and Bugti tribes happily settled. Two serious dacoities, the work of gangs from outside the Punjab, occurred, one of which inflicted some loss upon the Baloch Levy who followed it up; at the end of the year they were under investigation in the North-West Frontier Province. Nawab Jallab Khan, C.I.E., Chief of the Gurchani *Tuman*, died in October, and his son, Sardar Lashkar Khan, was formally installed in his stead in November 1915. Sardar Fakir Khan, Bozdar, was released from imprisonment in February 1916 by the Lieutenant-Governor in response to a plea for mercy submitted by the *Tumandars*, on conditions subjecting him to strict surveillance by the Commissioner of the Multán Division.

Condition of the People.

11. The prosperity of the agricultural population was not on the whole seriously shaken from any cause, the war not excepted. The level of wages was maintained and there was no lack of employment. In a few districts labour was scarce owing to heavy enlistment for the army and occasional complaints were heard of the high rates demanded by agricultural labourers. The loss suffered by cultivators in the previous year owing to the slump in cotton prices was to some extent made good by a general rise in prices in the year under report. Mortality from

plague was higher than in any year since 1907 and nearly a quarter of a million deaths were due to this cause. There was also a severe epidemic of cholera, and, though malaria in an epidemic form was almost entirely absent, the death-rate rose from 32 to 36·3 *per mille*. The birth-rate of 43·6 *per mille* was rather lower than the average of the previous five years.

Administration of the land.

Land revenue.

12. Reassessments in four districts and deferred enhancements in three others resulted in an increase in the fixed demand by nearly Rs. 5 *lakhs* to Rs. 217 *lakhs*. Rs. 215 *lakhs* were put down for collection, of which 99 per cent. was collected. Suspensions amounted to only about Rs. 1½ *lakhs*, as compared with an annual average of Rs. 5 *lakhs*, while over Rs. 7½ *lakhs* were collected on account of previous years and the total amount outstanding at the close of the year was less than Rs. 4 *lakhs*, a level only reached once in the last ten years. The fluctuating land revenue demand rose by over Rs. 10 *lakhs* to Rs. 128 *lakhs*, mainly owing to the extension of irrigation from the Upper Chenab and Lower Bari Doab Canals. In spite of increased receipts from the sale of waste-lands and town sites in the Lower Bari Doab Colony, recoveries under the head "Other Land Revenue" fell by about Rs. 7 *lakhs* to Rs. 42 *lakhs* owing to the natural decrease in the amounts to be realised by sale of proprietary rights in the older colonies.

There was a large increase in the number of coercive processes issued, mainly due to the efforts of Collectors in the Multan Division to remedy the unpunctuality of revenue-payers, though the foolish rumours which prevailed in this part of the province at the outbreak of the war were also partly responsible by causing a contraction of the accommodation which revenue-payers usually receive from the village bankers.

Land Records.

13. Record work was completed in two settlements and reached the final stages in four other districts. The experiment of utilising canal patwaris for revenue record work is in progress in two districts and promises to have beneficial results for the cultivators. Progress with mutation work was not wholly satisfactory, and the employment of kanungos to attest undisputed cases of inheritance has been shown to afford little relief. The conduct and efficiency of patwaris was satisfactory, but there was a falling off both in the number and quality of candidates which give some cause for apprehension and points to the necessity of making the pay and prospects of this class of Government servant more attractive.

Settlements.

14. Settlement operations were in progress in the districts at the beginning of the year and were started in one district during the year. In two districts operations were concluded and satisfactory progress was made elsewhere and by the end of the year assessment reports remained due from only three districts, and measurements and record work were uncompleted in only four districts. Traverses for field surveys in parts of the Sutlej and Chenab riverains were carried out by the Survey Department, and survey operations under the settlement staff were also in progress in Kángra and Simla. Satisfactory progress was made

with the determination of the inter-provincial boundary of the United Provinces and the Punjab on the Jumna. A permanent boundary was secured by agreement of the estates concerned for half the line, while for the remainder the Punjab Government has agreed that power should be taken by legislation compulsorily to determine a fixed boundary of estates, and the United Provinces Government has the question under consideration.

Canal colonies.

15. In the three old colonies of the Lower Chenab, Lower Jhelum and Chunian, the process of allotment is complete, and they have reached a stage of development which places them on a level with the ordinary districts of the Province. The year was a prosperous one, prices for food-grains and fodder ruling high and the value of land rising. Numbers of the original colonists have adopted an easy but shortsighted means of getting rich quickly, taking their newly acquired proprietary rights and pocketing the enormous excess of the present price for land over the nominal figure at which Government allowed them to buy—an excess which amounts in Lyallpur to over Rs. 200 per acre. The system of service grants worked with increased smoothness.

In the new colonies of the Lower Bari Doab and Upper Chenab Canals considerable progress was made in spite of great initial difficulties, about one-third in the former and about half on the latter canal of the allottable area being allotted. The prices realised for land sold by public auction fell considerably below those obtained on the Lower Bari Doab Canal in the previous year, but, considering the condition of the money market, the large extent to which the demand for land has been met by previous auction purchasers and the competition of colonists in the older colonies, who are willing to sell their holdings, they were not unsatisfactory. In pursuance of the policy of large grants for stock raising purposes which is a special feature of this colony eight regimental horse farms and three cattle farms were allotted on the Lower Bari Doab. 126,500 acres in peasant grants were allotted, shortness of canal supplies in a season of unusual drought and a groundless panic among the colonists as to the nature of their conditions notwithstanding. The cultivated area has risen from 35,000 to 138,000 acres, progress has been made in communications and a start made with arboriculture. Plans were completed in conformity with the recommendations of the Town-Planning Committee for the extension of the towns of Montgomery and Okara, at both of which large number of sites were sold, and for the creation of new towns at Khanewal and Chichawatni. The Upper Chenab Colony labours under certain disadvantages, a stiff soil, the fact that much of it will only receive *kharif* irrigation, and a mixture of classes among grantees, *viz.*, disappointed applicants for land in the Jhelum Colony and men receiving compensatory grants. Allotment began and 41,340 acres were given out, but no cultivation of the permanently allotted area was attempted owing to the delay in completing the Upper Jhelum Canal.

Wards estates.

16. Two estates and a portion of a third were released and two were taken under the superintendence of the Court of Wards. The important

Sheikhupura estate, which is the one partially released, is a signal instance of the protection extended to families of note by Government; debts amounting to Rs. 6½ *lakhs* when the estate was taken over 16 years ago have been paid off, and the assets increased by Rs. 2½ *lakhs*, while the cultivated area has been increased by 70 per cent. Nearly 6 *lakhs* of rupees were invested in land in the Lower Bari Doab Colony: the close connection thus established between the Court of Wards and the new Colony cannot fail to have a beneficial effect. In the Mamdot Estate a Central Co-operative Credit Society was established to finance village societies among the Nawab's tenants. The amount spent on permanent improvements showed a satisfactory increase.

Revenue and rent-paying classes.

17. The agricultural prosperity of the Province appears in the figures for alienations and the price of land. Not only the proportion but the actual area of cultivated land under mortgage is now less than in any year since 1901-02. The ascertained all-round average price for ordinary cultivated land is now Rs. 180 per acre, the sale value representing 134 years' purchase of the land revenue, as against 66 years' purchase in 1896-97. Ten years ago the selling price was Rs. 86 per acre. This extraordinary appreciation in value has taken place since the passing of the Alienation of Land Act, though doubtless the general recognition of the lightness of the Provincial standard of assessment is a contributing cause. The statistics for transfers show that evasion of the Act is generally either impracticable or unprofitable. Agricultural tribes were on the whole the gainers by the alienations reported during the year.

There was little demand for loans for land improvement, a result produced by easy credit in a year of high prices and by the opportunities offered in many districts to agriculturists by co-operative credit societies.

The relations between landlords and tenants continued cordial.

Legislative Council.

Legislation.

18. There were nine changes during the year among nominated members of the Legislative Council. The number of meetings held was four. Out of the three Bills introduced, one (The Punjab Military Transport Act, 1916) received the assent of His Excellency the Viceroy and became Punjab Act I of 1916, the second (The Punjab Medical Registration Act, 1916) was passed in April and received the assent in May 1916, and the third (The Juvenile Smoking Act, 1916) remained pending. A resolution recommending an extension of the system of village patrols (*thikri pahra*) was carried and passed; one resolution was lost and three were withdrawn. One hundred and forty-three questions were put and answered. Twelve Acts of the Imperial Council more particularly affecting the Punjab were passed.

Protection.

Police.

19. The year 1915 will stand out prominent in the annals of Criminal Administration in the Punjab. The outrages of the *Ghadr*

revolutionaries, the dacoities of the Jhang, Muzaffargarh and Multan Districts and the less obtrusive, but numerically important, activities of immigrant and resident members of criminal tribes imposed a strain of the severest kind on the skill, devotion and loyalty of the Police Force, from which it emerged with the greatest credit. On the whole, the response made by the people to the call for co-operation with Government for the preservation of peace and order was effective, and spirited assistance in the suppression of the *Ghadr* movement was rendered by the more important men of the Central Punjab, like the brave but ill-fated Sardar Bahadur Achhar Singh of Amritsar, and by single communities, as exemplified in the effective resistance offered by the villagers in the Chabba dacoity. Cases, however, were not wanting in the dacoities of the South-West Punjab where either deliberate connivance or indifference and neglect of duty by the leaders of the people resulted in deplorable crimes which brought ruin and misery on hundreds of homes.

The anarchist movement culminated in the now historic cases known as the Lahore Conspiracy and Supplementary Conspiracy cases. The plans of the revolutionaries embraced the commission of dacoities and looting of Government treasuries with the object of amassing funds, the manufacture of bombs, the collection of arms, and the seduction of troops and students—all measures subsidiary to the waging of war against Government. The head-quarters of the conspiracy was established in the Manjha, Malwa and Doaba tracts, but recruits were drawn to the ranks of the terrorists from districts as far afield as Rawalpindi and Jhelum and from other Provinces. At the end of January and the beginning of February the police were confronted with a serious and concerted outbreak of dacoities and murders perpetrated on inoffensive villagers in the Ludhiana and Amritsar Districts and the Maler Kotla State as a prelude to the capital design of the conspirators, which was to raise mutinies among the troops of the garrisons at Lahore, Ferozepore and other cantonments. The plans of the anarchists were, however, completely frustrated and the conspiracy rapidly collapsed, although a series of sporadic outrages followed. Nearly all the principal organisers and most active agents of the movement were brought to justice and only a few desperate men remained at large at the end of the year.

The dacoities and disorder that occurred in the Jhang, Muzaffargarh and Multan Districts in February and March were unprecedented in the annals of the criminal administration of the Province. The causes of this sudden outburst of lawlessness are varied and to some extent obscure: but while in some places the disturbances are attributable to economic causes such as strained relations between Muhammadan debtors and Hindu creditors, to local distress caused by high prices, and to the refusal of credit by grain-dealers or money-lenders, elsewhere there were unmistakeable signs that the disorder was the result of a fairly widespread belief that British rule was shaken and the time was ripe for the Muhammadan peasantry to release themselves from all obligations to their Hindu creditors and to start afresh with a clean sheet and with such loot as they could secure by the spoliation of their well-to-do neighbours. The local authorities at first failed to realize the significance

of this unexpected outbreak : and were also handicapped by the absence of the police reserves in other parts of the Province, with the result that 128 crimes of violence were committed before the disturbances were quelled. Since the outrages were usually committed at night and often whole villages participated in them, complete success could not be gained in tracking down the offenders: but some 700 convictions were obtained and terms of imprisonment averaging from 5 to 7 years awarded.

A great and sudden increase in offences against property, and especially burglary, which offers much less risk of detection than ordinary theft, was due chiefly to the immigration of criminal tribesmen from down-country into the central districts and also to the activities of the local criminal tribes and other criminal gangs on whom this influx naturally reacted. The first six months of the year were overshadowed by the abnormally high level of prices and an exceptionally severe visitation of plague, and to these succeeded a failure of the monsoon. Many of the criminal gangs were brought to justice and a comprehensive scheme for the settlement of those who are at large was under elaboration by an officer specially deputed for the purpose.

When all the circumstances described above are taken into account, the increase in cognisable cases dealt with by the police from 34,000 to 36,000 round, exclusive of offences under local and special laws, gives no ground for future apprehension. Murders actually declined by 5 per cent., and there was no appreciable rise in the number of thefts; cattle-theft, owing to the continued high price of fodder, was considerably less popular with the criminal classes.

The inefficiency of, and the difficulties in applying, the provisions of the Code of Criminal Procedure for placing habitual offenders on security continued to be the subjects of complaint. It is proposed to deal with the defects of the present system by special legislation.

The Criminal Intelligence Department achieved eminent success in a year of exceptional stress and strain. The enquiry into the distribution of the Police of the Province mentioned in last report was successfully concluded and resulted in a saving of about 3 lakhs in existing and contemplated recurring charges.

There was a further substantial decline in the work of the Chemical Examiner during the year.

20. Various circumstances, already noticed in the paragraphs on Police Administration, conspired to stimulate the disorderly elements of the community to crime. The resulting increase of 2 per cent. in real reported offences, though the figure does not take account of the more violent form of the resultant lawlessness, such as the *Ghadr* Conspiracy and the dacoities of the South-West Punjab, which were not dealt with by the ordinary Courts, is therefore not surprising. **Criminal Justice.**

The heinous political offences just referred to were tried by two Special Tribunals, each consisting of three members including two

Sessions Judges, constituted under the Defence of India Act, one sitting at Lahore and the other at Multan. The Lahore Tribunal in 1915 dealt with the first Lahore Conspiracy Case and its many ramifications, all of which were offshoots of the revolutionary movement inspired by returned emigrants, and that at Multan with some of the most serious of the organised dacoities perpetrated in the south-west Punjab in 1915.

There was a decline from 489 to 456 in murder cases and a marked falling off in cases of attempts at murder, culpable homicide, and in serious offences against the person generally; on the other hand, most classes of serious offences against property show a substantial increase. True cases of robbery and dacoity rose from 474 to 702, but the increase was practically confined to the Jhang and Muzaffargarh Districts and to three central districts, Lahore, Gurdaspur and Jullundur, where the activities of the *Ghadr* party were specially marked. Burglaries, thefts and cases of receiving stolen property were all considerably higher than in 1914, a result to be expected in a year of severe agricultural depression, and, but for the employment in several districts of the indigenous patrol system, it is probable that a much larger number of offences against property would have been committed. Offences relating to marriage continued to decline steadily, though slowly, doubtless as the result of the registration system which in some form or other is now to be found in many districts in the Province.

Faced though it was by special difficulties, the Magistracy, like the Police, coped successfully with its work. The percentage of death sentences confirmed was never so high, and the fact that during the last few years there has been less reluctance than formerly to impose the extreme penalty on convicted murderers, has had a marked deterrent effect. The percentage of convictions to cases brought to trial also shows a progressive improvement in recent years and District Magistrates disposed of an increased number of serious cases under section 30 of the Code of Criminal Procedure.

Prisons.

21. The year was for the Jail Department one of even greater strain than its predecessor. The number of prisoners admitted into jails rose by more than 10,000 and the average daily population by nearly 2,000. Admissions exceeded 50,000 including several hundred men—many of them dangerous and desperate—connected with the revolutionary movement. The daily population was nearly 17,000 and nearly all the most experienced Superintendents had been recalled to military duty. The standard of administration and discipline was, notwithstanding, not seriously impaired. There was a slight rise in the number of escapes but the number of jail offences fell, and the present figure is considerably less than half the number recorded seven years ago. The average number of prisoners throughout the year was nearly 2,000 in excess of the number for which the jails are designed, but the situation difficulty was met temporarily by confining prisoners at night in workshops and tents. The number of hospital cases rose, and this was due mainly to the unhealthiness of the summer but also partly in the case of two jails to overcrowding. There was, however, a most satisfactory

decline in the death-rate, owing mainly to recent measures for the segregation of tubercular prisoners in a special jail at Shahpur. The small proportion of prisoners sentenced to transportation who were sent to the Andamans has, in view of the risk of contamination of the ordinary jail population by so many hardened and dangerous criminals, been referred to the Government of India. The increasing number sent to the Borstal Jail reveals the need for increased co-operation with Government on the part of philanthropic bodies and individuals in a system which is so full of possibilities for the reform of the juvenile offender.

Civil Justice.

22. The great war, which has affected to a greater or less extent nearly every branch of the administration, appeared to have had but little disturbing influence on the Punjabi civil litigant, the number of suits instituted during the year being higher than that of 1914 and enormously above the average of the last 12 years.

The rise in the number of suits was entirely confined to the simplest class of suits, those for the recovery of money or moveable property, suits of greater value and complexity declining substantially. On the whole it may be said that the general uneasiness and contraction of credit caused by the war—as shown in another form by the large withdrawal of savings banks deposits—aggravated by the recent bank failures stimulated creditors to endeavour to realise their outstandings and that the tendency was encouraged or discouraged according as local economic conditions were favourable or unfavourable. The actual burden of work was probably lighter than in 1914. The average duration, however, was 78 days for contested and 39 for uncontested, original suits, as compared with 74 and 37 days, respectively, in 1914, while the average duration of civil appeals rose from 141 to 164 days. The Chief Court, despite a progressive increase in the amount of their civil work in recent years, shows a continuous increase in the number of disposals and the reduction of their pending file. The results of the year as a whole were not very favourable to the decree-holder seeking execution of his decree; the number both of applications and of pending files rose and the percentage of realisations to claims was not more than 26.

Work under the Provincial Insolvency Act continued to increase and the statistics of its working compared unfavourably with those for 1914. The law, as it stands, is admittedly unsatisfactory, and the Punjab Government have, in continuation of previous proposals for the general amendment of the Act, submitted to the Government of India certain specific recommenations with the object of enabling the courts to dismiss summarily an insolvency petition presented by an agriculturist debtor when it is apparent that he could, if he chose, satisfy his creditors' claims.

The amendment and simplification of rules framed under the Guardians and Wards Acts by the Chief Court appreciably lightened during the year the work of the courts in administering minors' estates.

Registration.

23. Registration business received a check in 1915 after a period of progressive expansion. The reason generally ascribed is the adverse influence of the war, but the contraction in operations appears to

have put the clock back no farther than 1913 and is significant of the slight impression made on the ordinary lives of the people by the European catastrophe. The number of compulsory registrations fell by 1 per cent. in sympathy with the decline in sales and mortgages and the value of the property involved declined by over 11 per cent. Transactions affecting immoveable property optionally registered rose in value by no less than 63 per cent. owing to the registration of a few high awards in three districts. Income slightly fell and expenditure, owing mainly to increased salaries and the cost of additional establishment sanctioned towards the end of 1914, slightly rose. The net profits on the operations of the Department declined somewhat from those of the previous year.

Local Self-Government.

District Boards.

24. As in the previous year, elections failed to evoke much interest, only 19 out of 133 vacancies being contested. The fact must be faced that the rural population have been slow to appreciate and assimilate the election system, which is still foreign to their ideas and traditions. The result is that once a member has secured a seat by election, which in practice means either by popular acclamation or by acquiescence, he is in nine cases out of ten, if he so desires, re-elected without opposition on the expiry of his term. The revision of the financial relations between Government and district boards, which is now in progress and has actually been introduced in the Rawalpindi Division, provides a suitable opportunity for a thorough review by boards of their affairs with a view to an intelligent distribution of their resources among the many objects for which provision has to be made. Government grants are being calculated on a sufficiently generous scale, but the time appears not far distant when local taxation must supply a larger proportion of the resources of the boards and some have already taken action to meet this contingency by increasing the local rate, which is at present extraordinarily low as compared with the local rates of other civilised countries.

Gross income, though double what it was on the average of the early years of the century, fell while expenditure rose.

Education, which receives from fees in secondary schools a proportion to total expenditure which compares very favourably with that in other provinces, was amply provided for. Medical objects in certain districts hardly received the attention they deserved. Steady advance was made in the spheres of improvement of agriculture and of the breeding of horses, cattle, and sheep, and the people show a growing appreciation of the services of the Civil Veterinary Department.

A tax for the promotion of sanitary improvement is now in force in individual villages in several districts. A Bill has been drafted and circulated for opinion which is intended to provide a simple machinery of self-government suitable to small towns and the larger villages, but for smaller villages Government has decided that the imposition of taxation and the passing of simple regulations under the District Boards Act will

meet existing requirements. At present only a few districts have shown any inclination to adopt such regulations, and the Sanitary Board has intimated to them that it is prepared to assist in financing suitable schemes of sanitation, provided that a portion of the cost is forthcoming from local sources.

Municipalities.

25. An enquiry made during the year in the case of 29 out of the 100 municipalities where the elective system has not yet been introduced showed no very general desire for change; a further significant commentary on the popularity of the system as applied to self-government is supplied by the facts that the percentage of vacancies contested declined from 46 to 30·5 and that the great majority of the committees which possess the power of choosing their own President still either elect a President from among the *ex-officio* members or apply to have one appointed (out of the committee) by Government or the Commissioner. Undesirable practices were unfortunately not uncommon, and with a view to eliminating or reducing them Government is engaged in the preparation of a revised set of rules for the registration of voters and the conduct of elections.

The working of the committees, while on the whole satisfactory in the matters both of the number of meetings held and of the attendance of members, incurred some frank criticism from Government, the object of which was not to discredit municipal work but to emphasise certain defects which retard the development and efficiency of urban self-government in the Province.

Income declined mainly owing to a falling-off in the amount of loans and grants from Government, and this was accompanied by a reduction in expenditure. Receipts from direct taxation show an enormous disproportion to income from octroi, which is larger than ever; the necessity for more enlightened views was pressed upon the notice of the committees. The substitution of a terminal tax for octroi is slowly but surely gaining ground.

In the matter of education most committees are fairly discharging their liabilities. In the improvement of urban sanitation, there has, on the whole, been steady progress, but the percentage of their income devoted by municipalities to medical relief is still inadequate.

Agriculture, Weather and Crops.

Additions to personnel of the Department.

26. A third Assistant Director of Agriculture was sanctioned during the year, and the appointment of an Entomologist was agreed to by the Secretary of State though the post is not to be filled until financial conditions improve.

The Lyallpur College

For the Lyallpur college the year was one of marked success. There was a stronger demand for admission both to the English and vernacular classes and a keener interest in the college was evinced by the public. The vernacular class is becoming specially popular with zamindars. A demand from private landowners, all Europeans, for three diplomatees of the College as managers of their

estates was a gratifying proof of the useful work done by the institution. It was decided that two appointments of *Zilladar* in the Irrigation Branch of the Public Works Department should be allotted annually to graduates of the college. A proposal to affiliate the college to the Punjab University is under consideration.

Work of the Department.

The year saw the successful issue of the experiments of the Agricultural Chemist in the reclamation, given steam tackle and ample irrigation facilities, of saline lands, and it has been established that the value of such lands can be enhanced by about 600 per cent. at an outside cost of about Rs. 50 per acre. The work of the Economic Botanist in separating and selecting different types of wheat and cotton continued on the lines which have been so successful in the past: in addition the isolation of types of barley and gram has been commenced. The practical value of these experiments and the success of the Department in popularizing their results were amply demonstrated by the large increase in the areas sown with the varieties of wheat and of American cotton which have been proved most suitable for the province. The attention of the Agricultural Engineer was devoted chiefly to well-boring operations, but he also did useful work in designing improved agricultural implements of a simple and inexpensive type to take the place of the primitive tools in ordinary use.

Veterinary and Livestock.

27. Though the subordinate establishment of the Civil Veterinary Department was 25 per cent. below its sanctioned strength, the record of work accomplished was highly satisfactory. Nearly 13,000 villages were visited and over 128,000 animals were treated by the touring members of the staff, while the number of animals treated at dispensaries was more than double that of any other province in India. The success which is being achieved by the Department in overcoming popular prejudice is proved by the large increase in the number of castrations and of inoculations, and vaccination against rinderpest and other diseases performed during the year. Lectures and demonstrations in villages were carried on as before with marked benefit to the people. The management of breeding herds on scientific lines was started on four farms allotted for the purpose in the Lower Bari Doab Colony. The Government Cattle Farm at Hissar suffered from a shortage of fodder due to the failure of the monsoon, but nevertheless issued a record number of bulls to district boards. A most successful campaign against *surra* constituted only one phase of the useful activities of the Camel Specialist.

The new buildings of the Punjab Veterinary College were opened in December 1915 by the Viceroy and the results are apparent both in the improvement in the training of the students of whom more than half, an unusually large proportion, belonged to the Punjab, and in the increased number of in-patients treated. A post-graduate course, which has been made compulsory for Veterinary Assistants before promotion to the rank of Inspector, was started during the year.

Fisheries.

28. Progress was made with an uniform system of protection for the spawning grounds of the Upper Beas by the application of the

law to the Mandi and Suket States, the Kangra district, and a portion of the Hoshiarpur District. Fishery conditions were investigated in Hoshiarpur, Jullundur and Amritsar. Trout fishing in Kulu was thrown open to the public. Measures for conserving the fresh water fish supply continued to receive attention.

Co-operative Credit Societies.

29. Co-operative credit had to contend with three serious difficulties, *viz.*, the dislocation caused by the war, the banking crisis and two successive bad harvests. In the circumstances some set-back might have been anticipated, but the societies again on the whole stood the strain with remarkable success and their sphere of usefulness to the agricultural community was naturally extended by the unfavourable character of the seasons. The year was one of consolidation rather than of expansion and societies were registered in only one new district.

The working capital of agricultural societies now amounts to nearly one million sterling. The paid-up share capital increased during the year by nearly Rs. 5 *lakhs* and the reserve fund by about Rs. 12·3 *lakhs*, giving a net increase in the working capital of Rs. 11·6 *lakhs*, after allowing for a decline of Rs. 6½ *lakhs* in the amount of deposits. The gradual but steady decrease in the rate of interest on loans, the increased proportion of the working capital owned by members, and the ever-growing assistance rendered by societies to their members which is evidenced by the increase in the amount of loans due, all point to the conclusion that the societies are duly fulfilling the objects for which they were created. Eminently satisfactory is the position of a number of societies which in the tenth year of their existence have become practically independent of outside assistance, the accumulated profits having been divided, one-fourth going to the reserve and the remainder to the members in the form of non-returnable shares; the new share capital is sufficient for the members' needs and the reserve is being deposited outside the movement.

The share capital and reserve fund of Central Banks rose from about Rs. 7½ *lakhs* to over Rs. 10½ *lakhs*, a sum which represents nearly one-third of their liabilities and affords strong evidence of their stability. The fluid resources of these banks on the other hand, though they cannot be estimated with certainty, certainly did not exceed Rs. 6 *lakhs* at the beginning of the year while repayments of loans and deposits amounted to about Rs. 27 *lakhs*, and though they were able to meet all calls made upon them during the year without difficulty, the margin of safety is not sufficiently large and the question of fluid resources must receive the closest attention. The concession recently extended to the Punjab of refunding 75 per cent. of the money order commission on remittances between the societies and their financing agencies will make fluid resources more readily accessible at time of need and a scheme to enable Central Banks to utilise each other's surplus balances, which is under consideration, should, if it materialises, assist towards the same end.

Government fully recognises that the rapid expansion of the movement for which the province now appears ripe must, if it is to

proceed on sound lines, be preceded by a substantial addition to the supervising staff. The Registrar was given the assistance of two gazetted officers during part of the year and comprehensive proposals for increasing the number of Inspectors are under consideration.

Rainfall.

30. The total rainfall for the year was far below normal. Autumn sowings in unirrigated areas were much restricted by absence of rain in April, May and June. The total monsoon rain was so much as 41 per cent. below the average in the province as a whole, the Multan Division escaping even the improved conditions of the latter half of September. The total winter rainfall was in even greater defect and was insufficient for the maturing of the "dry" crop, which suffered everywhere especially in the south-eastern and scuth-western districts.

Crops and Prices.

31. The autumn harvest was short in respect both of sown and matured areas; in the spring harvest the sown area was slightly above normal, but the defective winter rainfall caused great losses, and 24 per cent. of the sowings failed. The prices of wheat and rape-seed fell owing to the poverty of the spring harvest, the diminished foreign demand and the shortage of freight. Cotton and sugarcane on the other hand appreciated in value, the former owing to the combination of a short crop with a revived foreign demand and the latter owing to the diminution of overseas supplies of sugar for the Indian market.

Forests.

Forest Department.

32. There was a net decrease of about 441 square miles in the area under the control of the Forest Department, due mainly to the surrender of waste land in the Montgomery District for colonization purposes. The area of protected forests increased by about 200 square miles owing to the notification as such of certain *jagir* forests in Kangra. Government has agreed to surrender its rights in the trees growing in detached plots in Kangra when forest conservancy would be both unpopular and unprofitable. An increase in fees levied on nomadic flocks of sheep and goats has had the desired effect of reducing very largely the number of animals brought into that district to graze, while a tax on the sheep and goats of resident land-owners, in certain *tahsils*, has also been imposed in order to protect the people against themselves.

Planting has been started in the new irrigated plantation at Chichawatni and good progress was made at Kot Lakhpat. The failure of the 1915 monsoon was responsible for the want of success in artificial reproduction outside the irrigated areas. A closer co-ordination between the two branches of the Public Works Department and the Forest Department is being aimed at, in order to improve tree planting operations on roadsides and on the banks of canals.

The year was one of severe fodder scarcity, and in the Western Punjab it was found necessary to throw open large forest areas to free grazing to save as many cattle as possible. The value of free grazing is estimated to have exceeded Rs. 20 *lakhs* and though the forests suffered they must have

been instrumental in saving many thousands of cattle. One of the most satisfactory features of the year was the reduction of the areas destroyed by fire in the Rawalpindi and Kángra Divisions.

The outturn of timber amounted to 9½ million cubic feet, more than 3½ million above the figure for the previous year, and there was a corresponding increase of nearly 2 million cubic feet in the outturn of fuel. Gross revenue showed an advance of about Rs. 2½ *lakhs*, while the cash surplus of just less than Rs. 8 *lakhs* is almost a record. The brisk demand for resin and turpentine accounts for a substantial portion of the increase in revenue, and there is good ground for the expectation that, although at present the Punjab is cut off from the European and American supplies, this industry will remain firmly established even after the war. The Indian *chir* (*pinus longifolia*) has been found to be a suitable substitute for the American pine in ordnance factories, and the prospect of a more general use of fir and pine on Indian railways should open up a great future for the hill forests in the province.

Trade and Manufactures.

Industries.

33. Both in Jhelum and Attock Districts prospecting licenses for oil were granted and, in the latter district, about a quarter of million gallons of mineral oil were withdrawn. The general slackness of the cotton trade during the war has resulted in the closing down of several cotton-ginning factories; this and the exemption from the provisions of the Act of factories employing not more than 50 persons simultaneously on any day has reduced the number of registered factories from 201 to 187. There is no doubt that the lighting, ventilation, and sanitary condition of these factories improve year by year under the closer supervision which is now exercised. Munition work has created a considerable demand for skilled lathe-turners and in engineering workshops generally there is a tendency towards a rise in wages. A satisfactory feature is the decrease in accidents of all kinds, and factory owners are beginning to realise that the protection of the person and health of their operatives from the dangers of machinery and its surroundings is worth a little trouble, expense, and forethought.

Internal trade.

34. The Punjab, broadly speaking, is a province that exports raw and imports manufactured materials and that has, if its large imports of treasure averaging 724½ *lakhs* per annum be included, a balance of trade which inclines to be adverse. The triennium 1913—16 shows at work many abnormal factors of a most disturbing nature, ranging from famine in the United Provinces, the scarcity in the South-East Punjab and the Banking crisis, all of the earlier, to the great European War in the latter, half, and yet trade has been remarkably buoyant, both exports and imports, the latest average worth of which is, respectively, 31 and 32 crores round, showing a rise in both bulk and value. The general standard of comfort and the purchasing power of the people have not been affected. Indeed the enormous recruitment of about 100,000 men for the combatant forces and of some tens of thousands of followers has caused a great influx of wealth into many parts of the province, and this is probably one of the causes of the increased imports of treasure to be referred to below. Before the war the great bulk of the trade of the Province went to

Karachi, but the war has reduced exports to the Sind port by 19 per cent.; Bombay and Rajputana are the Punjab's next best customers. The seasons were, on the whole, favourable. In the matter of exports, wheat suffered by the shortage of freights, to some extent by the restrictions imposed by Government control, but also by artificial high prices due to the manipulation of the market by local dealers; cotton has lost the German and Austrian market, but the Japanese and Indian demand is steadily growing; a demand for gram and pulses has been stimulated by calls from the Army and the famine in the United Provinces; the oilseeds trade has also suffered by the war; woollen piece-goods have leaped in 7 years owing to the war demand from an export value of two and a half to one of twenty-three and a half *lakhs*. The war temporarily checked foreign imports, but a slight recovery took place in 1915-16 and Indian factories were not slow to take advantage of the opportunity. Many other articles were affected by the war, especially drugs, dyes, sugar and machinery and show diminished totals, but coal and coke, which have been in greater demand owing to Railway extensions in the Province, return largely enhanced figures. The imports of treasure increased rapidly throughout the triennium, though in the latter half gold was to a large extent replaced by silver owing to the stoppage of the issue of sovereigns from the treasuries.

External Trade.

35. The result of the triennium, after making the necessary allowance for a large paper increase in the volume of trade with Central Asia, is a steady expansion of both the external import and export trade only temporarily checked by the war, with a definite turning of the balance in favour of the Punjab. Imports are now worth 43·8 and exports 49·7 *lakhs*.

The figures for exports to Afghanistan show a decrease in weight accompanied by an increase in value, due chiefly to an appreciation amounting to nearly double in the cost of rice. The chief features have been a rise, through the stoppage of European products, of 3½ *lakhs* in Indian piece-goods, and the cessation of the trade in green tea which is attributed to its diversion to the railway route. There was a general decline in all the principal articles of import.

The Central Asian trade, which shows a balance of 14½ lakhs in favour of the Punjab, felt the effects of the closing of the Russian bank at Kashgar. The difficulty of remittances to the Punjab was met partly by the use of raw silk to the value of 5½ *lakhs*, but it directly produced a fall in the export of skins. The raising of the Punjab duty in 1916 sent up *charas* imports by 1,600 *maunds* and an interesting result of the war was the reimportation of 30 *maunds* of paints and colours, the price of which has considerably risen in India. In the case of exports there was a general decline during the past year, but Indian piece-goods and Indian silk profited by the elimination of Germany from the market and the trade in leather manufactured and unmanufactured, unrefined sugar and petroleum remained buoyant and profitable. Indian tea and refined sugar are too dear to retain their popularity.

The balance of trade with Chinese Tibet is still largely against India. The export trade continues to be disappointingly small, but the

improvement of the Hindustan-Tibet Road from Chini to Shipki, which is about to be taken in hand should stimulate it. Among imports salt, which is a medium of barter, fluctuates with the grain trade and borax declined owing to lately developed European competition, but the all-important trade in raw wool is steady. Exports fell under European piece-goods, which were partially replaced by Indian grain, the prices of which ruled high, and under sugar, refined and unrefined, the European supply of which was cut off.

Joint Stock Companies.

36. The purging effect of the Banking crisis of 1913 and of the measures which had to be taken in consequence of it is still visible, the number of registered companies with share capital continuing to decrease and only 77 remaining active during the year, while others are under liquidation or are being struck off. The indigenous companies are rapidly disappearing, leaving as survivors those under British and sound Indian control. The capital invested is diminishing, the sum paid up being nearly 3 *lakhs* of rupees less than last year. Promoters of new concerns show a preference for registration as private companies, which are exempt from the necessity of employing certificated auditors. The local Insurance and Provident Insurance Companies still decline in number. The small indigenous companies continue to disregard generally the provisions of the Indian Companies Act and, where warnings fail, prosecutions have to be instituted.

Public Works.

Public Works Department.

37. In the year under review, financial stringency necessitated considerable reductions in expenditure and, as far as possible, in establishment. The department has contributed its quota towards the war, for out of 43 officers on the Imperial Establishment, the services of 12 have been placed at the disposal of the Military authorities.

In December 1915 the late Viceroy honoured Lahore with a visit and on the 10th of that month formally opened the King Edward Memorial and the Veterinary College. The completion of the former will provide for the province a system of buildings for a hospital and for schools of medicine and original research. In Government House the new extensions and alterations are nearly finished, and at "Charing Cross" on the Mall a re-alignment of frontages, in the form of a crescent opposite the Queen's Statue, has succeeded in converting that portion of the Mall into a very attractive centre.

In the summer capital, too, there have been progress and improvement. The Simla Hydro-Electric Scheme, whose completion reports show a total outlay of Rs. 19 *lakhs*, has undergone its first extension, and its financial returns reveal most encouraging results. In the Walker Hospital extensive improvements have been carried out at a cost of nearly Rs. 1½ lakhs, while a new road, generously provided by Sir James Walker, the founder of the Hospital, has substituted an approach with a steady and easy gradient for the precipitous descent which formerly existed. The schemes of the Simla Improvement Committee have been held in abeyance for want of funds.

Turning to out-stations, one of the principal items of interest is the new tube wells at Sialkot, which have not only provided the town with a pure water-supply but seem also to have been effective in eliminating cholera, from which epidemic the town suffered severely in past years. At Lyallpur the water-supply has been extended and the grain elevator has been constructed and is ready for use, as soon as the required plant is received from England and financial considerations will permit of a supply of electricity. At Rawalpindi and three other towns drainage schemes are being pushed forward.

Existing communications have been efficiently maintained throughout the province, at a cost of about Rs. 13 *lakhs*, and at a few places in the hills traders now enjoy the use of steel truss bridges which span mountain streams and torrents.

Irrigation.

Irrigation Department.

The direct receipts of the Irrigation Department during the year were about Rs. 2 *crores* and 48 *lakhs*, which represents a decrease, compared with the previous year, of over Rs. 6¼ *lakhs*. There was, however, a corresponding reduction in expenditure of Rs. 12¾ *lakhs*, the figure for this year being a little over Rs. 1 *crore* and 64 *lakhs*.

The poor nature of the monsoon and the consequent low supplies in rivers and canals accounted for a decrease both in irrigated and matured areas and, if the land irrigated by the triple canals is not taken in the comparison with last year's totals, the difference is very much more marked. The percentage of profit on the capital outlay in Productive Major Works shows a similar falling off, the figures being 10·90 and 7·56, according as interest charges are excluded or not, as against 14·70 and 11·35 in 1914-15.

The year witnessed the realisation of the great Triple Project, the Upper Jhelum Canal, after an unforeseen delay, being opened for irrigation on the 7th October 1915. Two months later, on the 9th December, the late Viceroy paid a visit to Mangla, the head-works of that canal, and performed the ceremony celebrating its completion. During the year under review, however, no irrigation was done by this canal and this fact accounts, to some extent, for the deficit in the income anticipated. Heavy expenditure was incurred on silting reaches and improvements to channels and banks on the Western Jumna Canal; leaks were discovered in the Lower Bari Doab, the channels of which required staunching; and at Khanki, on the Lower Chenab, a defence work had to be constructed. The Ravi Inundation Canals ceased to exist during the year, the area which they commanded being transferred to the Lower Bari Doab.

A temporary Division was formed, for six months, to elaborate projects for remodelling works at Dadupur and Tajewala. Proposals for the construction of a high dam across the Jumna at Koch had to be abandoned owing to the impossibility of finding suitable foundations. On

the Lower Jhelum Canal a Project Division was formed with a view to remodelling the canal and its distributaries so as to take advantage of any gain of command due to silting and to secure uniformity of action and progress in the improvements of the outlet system.

RAILWAYS.

39. During the year three new sections of railway were opened for traffic, from Jullundur City to Mukerián, the Mandra-Bhon and the Siálkot-Narowál lines. The former was completed in October 1915 and the two latter at the beginning of 1916. The length of railway line in the province at the end of the year stood at the figure of 4,398 miles, of which the State owned about 64 per cent., and worked about 86 per cent. The remainder was owned and worked by Companies or by Native States.

REVENUE AND EXPENDITURE.

40. The revenue raised in the Province amounted to Rs. 8,98,12,000, or Rs. 8,34,000 more than in the previous year. The increase is principally under Stamps nearly Rs. 3¾ *lakhs*, Forests Rs. 2,89,000, and to a smaller extent under Interest, Excise, Income-tax and Agriculture. The increase of over Rs. 2½ *lakhs* nearly under Miscellaneous is due to a change in the classification of the contributions. There was a decrease of nearly Rs. 5 *lakhs* under Land Revenue and over Rs. half a *lakh* each under Salt and Civil Works. General.

The total expenditure for the year was Rs. 6,11,93,000 against Rs. 6,17,67,000 in the previous year. There was an increase of over Rs. 17 *lakhs* under Irrigation Major Works due to large sums spent on repairs to the canals. An increase of Rs. 6½ *lakhs* under Famine Relief is due to the grant of concessions for carriage of fodder. Jail charges increased by over Rs. 2 *lakhs*. Education and Police charges and expenditure on Courts of Law increased by over Rs. 1¾ *lakhs* in the case of the two former and nearly Rs. 1½ *lakhs* under the latter. Pension charges also increased by Rs. 1½ *lakhs*. Expenditure on Civil Works decreased by about Rs. 27¾ *lakhs*, and under Medical by Rs. 8½ *lakhs*, and Miscellaneous by Rs. 1¾ *lakhs*.

41. The process of re-issuing notifications under the new Punjab Excise Act was completed during the year under report. Volume I of the Excise Manual dealing with liquors was completed and issued at the end of the year. Volume II (Opium) and Volume III (Forms) are nearing completion. Excise.

The year was marked by a further decrease in the consumption of both country spirit and opium. In the case of the former consumption fell from 382,236 to 331,603 gallons and in that of opium from 59,761 to 57,466 *sers*. The decrease in the case of country spirit is due partly to the raising of the rate of still-head duty from Rs. 5 to Rs. 6-4-0 per proof gallon from 1st April and in the case of opium to

the enhancement of the issue price from Rs. 20 to Rs. 25 per *ser* from the same date. The decrease is also partly due to the war and the organised campaign against illicit distillation and smuggling.

The revenue from Excise was Rs. 70,08,878, an increase of Rs. 87,787. The enhancement of still-head duty on country liquor caused an increase of over Rs. 2 *lakhs* under this head, but vend fees dropped by over Rs. 3 *lakhs*. There was also a decrease of Rs. 1¼ *lakhs* under Malt liquors. Thus there was a net loss of Rs. 2·3 *lakhs* under liquor. This was, however, more than counterbalanced by a rise of Rs. 3 *lakhs* under opium due to the increase in the issue price of opium. Excise expenditure increased from Rs. 2,40,814 to Rs. 2,56,995.

The number of country spirit retail licenses was reduced from 748 to 720 and now stands at one for every 27,150 of the population, against one for every 15,525 ten years ago. Licenses at fairs were greatly restricted and in Amritsar all liquor shops were removed from the interior of the city to municipal premises in the outskirts. Local and municipal bodies were constituted the regular advisers of the Collector on questions of Excise Policy. Convictions for drunkenness decreased by 170 to 961.

The consumption of *charas* increased from 21,694 to 21,851 *sers* and that of *bhang* from 89,337 to 102,562 *sers*. The increase in the latter case is to some extent explained by the unusual heat of the summer of 1915, and the consequently abnormal demand for this cooling drink. Licenses for the sale of cocaine fell from 54 to 52. The number of grains sold again slightly increased from 15,341 to 15,569. There was a reduction in sales at Simla and Ráwalpindi, but in Lahore there was increase of over 1,100 grains.

Income-tax.

42. Collections were again better than in the previous year, rising this time by about 3½ per cent. from 1,748 to 1,812 thousands of rupees and, considering that the war broke out during the year on which the assessment was based, the result is much better than might have been expected. The fact is that many trades reaped large profits from the war. As a result of the steps taken last year in the matter of assessing securities a small income was reported under this head during the year. The group system of assessment is still under trial in some districts. A special assessment was carried out in Jullundur City and Cantonment, and resulted in an increase of over Rs. 16,000. A special staff consisting of an Extra Assistant Commissioner and 3 Naib Tahsildars and establishment was appointed for the revision of the assessment in the Lahore Division, Ferozepore and Ludhiána. A report on the first year's working is awaited.

Stamps.

43. Stamp revenue increased by Rs. 3,77,857, of which Rs. 2¾ *lakhs* were from the sale of court-fee stamps. This is explained by increased litigation, the institution of suits of high values and the good *rabi* harvest of 1915, which induced creditors to realise their outstanding debts by having recourse to the courts. The income from non-judicial stamps,

which had fallen by Rs. 1,04,000 in the previous year as compared with 1913-14, again went up to Rs. 19,68,957, a figure about Rs. 46,000 below the receipts of 1913-14. One cause of increase that deserves attention is the tendency under the stimulus of increased supervision to substitute formal deeds for irregular entries in account books ; there is something like a return to pre-war conditions, but it is less marked here than in the case of judicial stamps. The proposal to reward officials for discovery of cases of insufficiently stamped documents did not receive the support of the Hon'ble Judges of the Chief Court and was not further proceeded with.

Vital Statistics.

44. The year on the whole was not a healthy one. The unusually heavy rain in March and the beginning of April retarded the development of normal hot weather actions and thus prolonged the worst epidemic of plague since 1907. The practical failure of the monsoon and consequent abnormally dry weather during the remainder of the year resulted in the disappearance of plague in June, its reappearance later in the year only on a very small scale and an almost entire absence of malaria in epidemic form. The price of food-grains remained unusually high throughout the year. **Public Health.**

There was a fall in the birth-rate which, however, only amounted to a defect of 1·3 on the average of the previous five years, and this was attributed partly to the effect of plague and partly to the absence on military service of so many young men and men in the prime of life. There was a considerable rise in the death-rate, from 32 to 36·3 *per mille*, which was chiefly due to plague, though cholera and respiratory diseases were contributory causes. The figures with regard to infant mortality, however, showed a very marked improvement. The general death-rate in towns was practically the same as that in rural circles, but there were considerable differences in respect of the various causes of death, the rural rate for plague being 6·03 in excess of the urban rate, while respiratory diseases accounted for 3·24 *per mille* more deaths in towns than in country circles. The remarks of the Government of India contained in their resolution of 1914 on the lack of complete and accurate vital statistics as constituting an impediment in the way of sanitary reform were brought to the notice of local bodies, and a project has been approved for obtaining accurate registration in a selected area by means of a special staff ; the realization of this project, however, awaits the return of normal financial conditions.

The number of deaths registered as due to cholera was 13,196, the largest number in any year since 1903. Deaths were reported from every district in the province, 69 towns and 1,678 villages being infected. The experience of the year still further emphasised the importance of controlling the sanitary arrangements at all large fairs, and in this direction good work is being accomplished.

Only 1,694 deaths were due to small-pox, the lowest number recorded since registration of deaths was introduced. Eleven districts

of the province were practically free from the disease. The death-rate from fevers was, however, again very high, amounting to 14·73 *per mille*, though this figure represents an improvement on the previous year which is accounted for by the almost entire absence of epidemic malaria. It has already been observed that the epidemic of plague with which the province was afflicted in 1915 was the worst since 1907. Twelve districts suffered severely, and a total of 244,104 deaths was recorded. The epidemic had commenced in the latter portion of 1914 and the full effects were felt in the first half of 1915. Despite the severity of the outbreak the special staff were able to afford medical relief to a large number of persons in the worst affected areas. Some local bodies also entertained paid agents to assist in the work, and much valuable voluntary help was forthcoming. The increase in the recorded number of deaths from respiratory diseases was a disquieting feature of the year, but was no doubt very largely due to improved diagnosis. At the same time the heavy toll that is taken by tuberculosis of the lungs especially in towns cannot be disregarded, and the question was commended by Government to the fullest consideration of local bodies and other authority especially in connection with future extensions or alterations of towns.

Sanitation.

45. Eight *lakhs* were originally allotted to the Sanitary Board for distribution among local bodies, but it was subsequently found necessary, for financial reasons, to withdraw more than half this sum. Over Rs. 3½ *lakhs* were, however, distributed by the Board in aid of urban drainage and water-supply schemes and about Rs. 15,400 for rural sanitation. There have been noted elsewhere the adoption of simple regulations under the District Boards Act to promote the sanitation of villages and the acceptance in a number of cases of liability for taxation to meet the cost of elementary measures of conservancy. In such cases, when there is an evident desire on the part of the inhabitants for sanitary progress, Government considers that the strict requirements may be waived of the rule which makes a contribution of half the cost from local sources a *sine quâ non* for any grant-in-aid of a sanitary scheme. With regard to urban sanitation there are no fresh developments to record, but drainage and water-supply schemes figure prominently in the activities of most municipalities. An experiment in the administration of quinine to school children, which was made in Amritsar in the autumn of 1914, met with considerable success.

Medical Relief.

Dispensaries.

46. There was a net increase of six in the number of dispensaries, making a total of 473 institutions. Expenditure rose from Rs. 13,66,404 to Rs. 14,00,144, the enhanced cost of establishment exceeding the reduced outlay on buildings. An increase in the expenditure borne by local bodies was more than counterbalanced by a decline in Government contributions, and receipts, including the opening balance, showed a reduction of nearly Rs. 10,000.

Diseases and patients treated.

There was a small increase in the number of in-patients treated, but, despite severe mortality from plague and cholera, the number of

out-patients fell by 92,701. The explanation is to be found in the almost complete absence of malaria owing to an abnormally dry summer. The question of the inadequacy of arrangements for medical relief in certain districts is being taken up. The growing confidence of the people in Western surgical methods is demonstrated by the large increase in the number of both selected and other operations performed during the year.

Treatment of women.

The figures for women treated as in-door patients shew a slight actual gain. A new Zenana Hospital was opened at Hissar and a missionary dispensary for women at Montgomery, bringing the total number of female dispensaries up to 24. The duplication of municipal and missionary female hospitals in a single place is a form of waste of power to which attention has been drawn. The dearth of workers, which is at present one of the chief obstacles to the spread of female medical aid, should before long give way before the facilities now provided for the education of women entering the medical profession by the Punjab Medical School for Women at Ludhiána, as well as certain measures either in being or in view for improving the prospects of the class.

General.

Satisfactory progress was made with the extension scheme of the Mayo Hospital and the new Hospital and Medical College were formally declared open by His Excellency the Viceroy in December 1915. The district boards of Jullundur and Karnál and the municipal committees of Lahore and Amritsar patriotically provided beds for sick and wounded soldiers of the Indian Army. Owing to the reversion to military duty of a large proportion of officers of the Indian Medical Service a number of Civil Surgeoncies, much in excess of the number reserved for them, was held by Civil Assistant Surgeons, while over a hundred Civil Sub-Assistant Surgeons were surrendered for duty under the Army Department.

Education.

47. Despite the three scourges of war, pestilence and severe scarcity, education maintained the steady all-round progress noticed in successive previous reports for years past. As yet however the position is that only one boy in four and one girl in nineteen are under instruction, that the great majority of those receiving instruction do not go beyond the lower primary stage, that the diffusion of education among different communities and districts is still very unequal, and that, though the desire for it is steadily spreading among the middle class population in town and country—including the fairly well-to-do agriculturists—,the general attitude of the ordinary peasant and of the artisan and menial classes towards education is one of indifference or of passive resistance which cannot be easily or speedily overcome.

The chief noticeable developments were as follows :—The total expenditure rose by nearly five *lakhs*, the attendance of pupils by over 16,000, and the number of educational institutions by 285 ;

the percentage of the population of school-going age, which was actually being educated, reached 24·4 in the case of males and 5·21 in that of females, the corresponding figures ten years ago being 15 and 2·3 per cent. Untrained continued to be replaced by trained teachers and there was both a marked advance in the attendance at girls' schools and a large increase in the contributions from private sources.

Both European and Indian schools and scholars were stirred by the call to arms. In the Ráwalpindi Division alone 868 teachers and *ex*-students of secondary schools besides 1,682 *ex*-pupils of primary schools enlisted in the army and many contributions were received from schools to the various funds connected with the war.

Of a total expenditure of Rs. 112 *lakhs*, about Rs. 50 *lakhs* were provided by Government directly or through grants to local bodies, Rs. 21 *lakhs* by local bodies from their own resources, over Rs. 25 *lakhs* from fees and over Rs. 15 *lakhs* from private sources.

The number of students in the Arts Colleges rose by 379 to 3,893. The extension of higher education among the Sikh and Muhammadan communities respectively was exemplified by the increase at the Khalsa and Islamia Colleges, while the newly opened Sanatan Dharm College in Lahore should stimulate sound educational progress in the orthodox Hindu community and also help to relieve the congestion in the older colleges. The system of special University lectures was continued with success and the University Library was re-arranged by an expert from America.

The year was one of steady progress in professional and technical education. The completed new buildings of the Medical and Veterinary Colleges were opened by the Viceroy and the increased facilities provided for veterinary study are already said to be producing marked results. The removal by the Chief Court of its restriction on the number of pleaders has increased the demands on the Law College ; the staff has been reorganised and the number of students on the rolls has practically regained its former figure. The number of Industrial schools increased by 2 to 30 with 2,769 pupils.

The number of those under training for the teaching profession is rising rapidly, but the present period of training—less than a year—in the Training College and Normal Schools is hardly sufficient for the fulfilment of the ideal of the training institutions, which is to create a proper attitude of mind towards teaching, and the problem is to lengthen that period so as to ensure the object in view. The steady increase in the number of Normal Schools—the number rose from 6 to 9 during the year—will help materially to that end, and the very necessary scheme for a Junior Training College at Jullundur will be proceeded with when funds allow.

The number of pupils and recognised institutions has again increased, the former by 4,662 and the latter by 25, and the proportion

of trained teachers continues to rise. It is in the sphere of secondary education that the educational enthusiasm of local bodies and private agencies is principally displayed, as exemplified by increased expenditure during the year from private sources and district boards.

The number of primary schools increased during the year by 206, the number of pupils by 6,288, and the expenditure by a *lakh* and a half; but, though the proportion of trained teachers rose and now amounts to two-thirds of the total number, the number of teachers was still inadequate. The improvement in the pay and status of the teachers was a very satisfactory feature.

The number of Indian girls' schools rose by 52 to 971, and the number of pupils, largely in lower primary classes, by 4,371 to 49,367 or nearly double last year's increase. Female education is, however, still in its infancy in this Province, and the lack of competent teachers, especially for the lowest classes, is inevitable at this stage.

The European schools had a successful year. The number of schools and scholars remained unaltered. The expenditure from all sources rose by Rs. 40,000 to Rs. 10,52,257.

The year's results show that Muhammadans being relatively poor, are less able to afford the more expensive and less immediately useful forms of education, but they resort readily to training classes, industrial schools and technical colleges which enable them to earn their livelihood at once.

Literature and the Press.

48. The literature of the year showed signs of advance, and the educated classes inclined to take a larger share in its development generally, though, mainly owing to the rise in the cost of paper, there was a decline in the number of publications. Republications are nearly one-third as numerous as original works, and translations still bulk largely. Poetry is still the most popular vehicle of expression, but works of real merit were rare. The volume of religious literature was hardly so great as in the previous year. Abler writers began to use the novel in connection with history.

More than half the newspapers and periodicals produced in the Province are published in Lahore. The high water mark of journalistic effort was reached in 1914, but in 1915 the tide was on the ebb, there being a net decline of 4 in the number of newspapers. The causes for the decline were the absorbing interest of the European war and the failure on the part of printers and keepers of presses to keep within the bounds prescribed by Government for the legitimate conduct of their business. A demand for security under the Press Act of 1910 resulted in the collapse of 21 out of the 28 interests from which the demand was made. In one case the security deposited was forfeited. Prohibitions under the Defence of India Act were issued to four newspapers against the publication of unauthorised news and improper comments concerning the war. Numerous formal warnings were administered in regard to the appearance of

matter of a nature objectionable on political and general grounds. Out of 21 prosecutions under section 292 of the Indian Penal Code all the completed cases, except 3 which were against one and the same newspaper, were successful, while in two cases apologies were tendered and accepted. In one of the three acquittals Government appealed to the Chief Court. The *Zamindar*, the third in size of circulation among the Indian-managed newspapers published in English, ceased publication during the year.

PART II.

DEPARTMENTAL CHAPTERS.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Survey and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 59—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

Personnel. 1. Sir Michael O'Dwyer, K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year under report.

General. 2. The decided success of the arrangements for the systematic inspection of the judicial courts referred to in the last report justified the re-appointment of a third temporary Additional Judge for the cold weather of 1915-16. The Government of India sanctioned in August 1915 the retention of the Additional Secretary to Government for a further period of one year.

8.—Relations with Tributary States and Frontier Affairs.

I.—PHULKIAN STATES.

3. Lieutenant-Colonel B. E. M. Gurdon, C.I.E., D.S.O., remained Political Agent of the Phulkian States throughout the year.

The post of Personal Assistant to the Political Agent remained vacant.

PATIALA.

Area, 5,412 square miles; population, 1,407,659; approximate revenue, Rs. 1 crore; army and police, 5,520; Maharaja, Sir Bhupendra Singh, G.C.I.E., Sidhu Jat; age 25; has a male heir; salute, 17 guns.

Personal. 4. In May 1915 His Highness the Maharaja suffered a double bereavement by the deaths of his infant son and the "Kolgarh" Maharani, and for several months afterwards his own health remained indifferent.

PHYSICAL AND POLITICAL GEOGRAPHY.

He spent the summer of 1915 in Simla. The death of Raja Sir Ranbir Singh, K.C.S.I., the Maharaja's uncle, in December, removed from Punjab society one of its most familiar figures. Sir Ranbir Singh sat on the Provincial Legislative Council from 1903 to 1905 and was appointed to the Imperial Council in 1910. His unfailing courtesy and kindness endeared him to all with whom he came in contact and his interest in sport and horses gave him a host of friends—European and Indian.

The war.

5. The active assistance rendered by the Darbar in the prosecution of the war continued to be a striking feature in the administration of the State. Throughout the year the State Imperial Service troops were represented at the front by a regiment of cavalry (the Rajindar Lancers) and a battalion of infantry. These were reinforced according to their requirements by drafts amounting to over 400 officers and men. Two double companies of Imperial Service Infantry were attached to the 14th Sikhs in the Dardanelles and suffered heavy losses. Egyptian despatches mentioned the names of Sardar Nand Singh and Sardar Balwant Singh of the Rajindar Lancers and Sardar Gurbakhsh Singh of the Imperial Service Infantry. Further contributions by the State towards the war included 612 camels together with sarwans for the 72nd Hired Camel Corps, and 74 sarwans for the 70th Hired Camel Corps, 78 horses for the Remount Department, bringing the total number of horses so supplied by the State to 300, the training of a large number of remounts in, and at the expense of, the State, the collection and presentation of over 350 tons of bark to a Government leather factory, and the sending of many thousands of shirts and other clothing, as well as great quantities of other appropriate gifts, such as 30 tons of sweets, ten thousand tooth brushes, eleven thousand combs and nine tons of soap-nuts, to Sikh troops in the various expeditionary forces. A generous donation of £12,500 to the Hospital for British Officers at Staines evidenced the Maharaja's personal interest in the welfare of his European friends.

Crops and irrigation.

6. Both harvests suffered considerably from lack of rain, the cultivated area shrinking to three-fourths of the area recorded in the previous year. A scarcity of fodder in the southern tracts called for State relief, but there does not appear to have been any widespread distress for the revenue was easily collected and no suspensions were granted. In spite of the deficiency of water in the canals the keen demand for irrigation was well met, thanks to careful improvement and maintenance of channels, and the area irrigated for the rabi was the most extensive on record.

JIND.

Area, 1,259 square miles; population, 271,728; approximate revenue, Rs. 26 lakhs; army and police, 1,776; Maharaja, Sir Ranbir Singh, G.C.I.E., K.C.S.I., Sidhu Jat; aged 37; has no male heir; salute, 11 guns.

Personal.

7. His Highness the Maharaja, who enjoyed good health throughout the year, was raised to the dignity of Knight Grand Commander of the Order of the Indian Empire in January 1916 and was invested with the insignia of the Order by the Viceroy in the following month at Delhi.

Administration.

8. Sardar Bahadur Sardar Shamsher Singh, C.I.E., was Chief Minister throughout the year and continued to supervise the general administration of the State, under the Maharaja, with conspicuous success. Some changes were made among the highest officials of the State. The Sadr, Judicial and Civil Courts were amalgamated and a Sessions Court with three Judges was established.

The war.

9. The Jind Darbar continued to co-operate in the war with characteristic thoroughness. The State Imperial Service Infantry served in East Africa throughout the year and made a name for itself. Its Commandant Sardar Natha Singh, Commander-in-Chief of the Jind State forces, was honoured with the Order of British India of the first class and the

title of Sardar Bahadur for distinguished service in the field, and Subedar Harnam Singh obtained the Indian Order of Merit of the second class for his gallantry at Jasin in January 1915. Wise and generous measures were taken by the Darbar to mitigate its soldiers' hardships in the field and to ensure them adequate pensions when their work is done. In the supply of men and horses the State has rendered important aid to the army, while the contributions of money and commodities made by the Darbar include such notable gifts as Rs. 75,000 to the Provincial Aeroplane fund, donations of Rs. 4,000 and Rs. 700 to the Hospital at Dehra Dun and the St. John's Ambulance Association, and presents of tents, clothing and food for its soldiers.

Crops and agriculture.

10. Both harvests were very poor and there was considerable distress throughout the State, owing to scarcity of fodder, alleviated to some extent by prompt arrangements by the Darbar for its import at cheap rates. In the circumstances the fact that no suspensions were reported testifies to the justness of the land revenue rates and the prosperity of the people.

Public Works.

11. It was hoped that the Jind-Panipat Railway would be open very shortly after the end of the year under report. To the sum so wisely invested in this project by the State over eight lakhs was added during the year.

Miscellaneous.

12. Throughout the year the Darbar rendered valuable assistance to the Punjab Police in dealing with returned Indian emigrants of doubtful loyalty and its cordial co-operation with the Indian Police in uprooting a seditious society supported by foolish young Sikhs from adjoining British districts was warmly acknowledged by the British authorities.

NABHA.

Area, 928 square miles; population, 248,887; approximate revenue, Rs. 19 lakhs; army and police, 1,591; Maharaja, Ripudaman Singh, Sidhu Jat; aged 33; has no male heir; salute, 11 guns.

Personal.

13. The Maharaja followed his usual custom in retiring to Mussoorie and Dehra Dun for the hot weather. He visited the Lieutenant-Governor at Lahore in April 1915 and in February 1916 took a prominent part at the opening ceremony of the Hindu University at Benares, an institution in which he takes a generous interest.

Administration.

14. Sir P. C. Chatterjee, who had been engaged in the previous year to be the Maharaja's Chief Minister for a year, resigned in July 1915. The administration of the State generally continues on the lines it has followed during the last several years.

The war.

15. The Maharaja contributed Rs. 75,000 towards the Punjab Aeroplane Fund and sent Rs. 7,500 to a fund for supplying comforts for the troops in the field.

II.—STATES OF THE BAHAWALPUR AGENCY.

16. Lieutenant-Colonel A. C. Elliott, I. A., was Political Agent throughout the year.

BAHAWALPUR.

Area, 15,000 square miles; population, 780,641; approximate revenue, Rs. 43½ lakhs; army and police, 1,935; Nawab, Sadiq Muhammad Khan, Abbasi, V, Daudputra; aged 11; salute, 17 guns.

Personal.

17. His Highness the Nawab fell seriously ill at Murree with enteric fever in August and September 1915, but made a very satisfactory recovery under the care of Colonel McIvor Smith, I.M.S., the Civil Surgeon. Since his return to the Aitchison Chiefs' College he has kept excellent health and made good progress in his studies, gaining a prize for religious knowledge.

PHYSICAL AND POLITICAL GEOGRAPHY.

Administration.

18. The Council of Regency continues to conduct the State's affairs successfully. Salient features in its administration, apart from its loyal and practical interest in the prosecution of the war, were the improvement of the Education Department, to which a Director was appointed, the satisfactory conclusion of long drawn-out negotiations with the Bikaner Darbar over extradition arrangements, and the launching of State-directed Co-operative Credit Societies. The installation of electric light in the town of Bahawalpur is significant of the economic progress of this State, the most remote of the greater dependencies of the Punjab.

The war.

19. The Inspecting Officer's report shows that the Imperial Service Troops were kept as highly efficient as ever. The State troops in Egypt were reinforced by a draft in June 1916 and in July the State supplied the army with 104 camels and 30 mules. The Darbar's contributions to various funds connected with the war amounted to more than a lakh of rupees.

Crops and agriculture.

20. The spring crop was a heavy one, but scanty rainfall and shortage of water in the canals led to a poor autumn harvest. There does not appear to have been any serious suffering among the people. Settlement operations were started in the Minchinabad District.

Maler Kotla.

Area, 167 square miles; population, 71,144; approximate revenue, Rs. 12½ lakhs; army and police, 966; Nawab, Sir Muhammad Ahmad Ali, Khan Bahadur, K.C.S.I., Pathan; aged 35; has a male heir; salute, 11 guns (2 personal).

Personal.

21. The Nawab was honoured with a Knighthood of the Order of the Star of India in June 1915. He spent part of the summer in Simla where he was received at informal meetings by the Viceroy, the Lieutenant-Governor and the Commander-in-Chief. In October 1915 the Nawab went to Kathiawar to be present at the wedding of his niece to the heir-apparent of the Mongrol State, and on his way back he visited Bhopal.

Administration.

22. There was no change in the administration during the year The Foreign Minister, Saiyid Abdullah, received the title of Khan Bahadur in recognition of his long and useful service to the State.

The war.

23. The Imperial Service Sappers, twice reinforced by drafts from the State, remained at the front in France until December 1915. The State troops then joined the Indian "D" Force and landed at Basra in February 1916. Sardar Mehr Muhammad Khan, who commands the State forces, was employed in Egypt on the staff of the "E" Force. The Darbar supplied and maintained an ambulance car for wounded arriving in Bombay. A contribution of 230 tons of bark was made to the Government leather factory at Cawnpore.

Faridkot.

Area, 642 square miles; population, 130,294; approximate revenue, Rs. 12½ lakhs; army and police, 373; Raja, Brij Indar Singh, Barar Bans, Jat; aged 19; salute, 11 guns; has a male heir.

Personal.

24. His Highness enjoyed excellent health throughout the year, benefiting greatly by his visits to Simla and Dalhousie in the hot weather. He continued his administrative training under Mr. Barry, I.C.S., his guardian, and after the latter's departure worked on the same lines under the supervision of the Superintendent and the Political Agent. During the year a second son was born to His Highness.

Administration.

25. The affairs of the State were successfully controlled during the year by Rai Bahadur Ganga Sahai. The new scheme of administration worked well. The several departments of Government were thoroughly overhauled, and its financial position strengthened.

The war.

26. The Imperial Service Sappers spent the year in East Africa, where they were thrice reinforced by drafts from the State. Major Mainprise R. E., the British officer in charge, who had accompanied them from

India, was killed. The news of his death evoked most sincere tributes to his memory in Faridkot, where shops were closed and the troops went into mourning. The donations made by the State to various war funds amounted to nearly a lakh of rupees and included Rs. 75,000 to the Aeroplane Fund.

III.—STATES OF THE JULLUNDUR DIVISION.

KAPURTHALA.

Area, 630 square miles; population, 268,133; approximate revenue, Rs. 30 lakhs (inclusive of about Rs. 16 lakhs income from Oudh estates); army and police, 1,401; Maharaja, Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahluwalia Sikh; aged 43; has a male heir; salute, 11 guns; tribute, Rs. 1,31,000.

Personal and Administration.

27. His Highness the Maharaja returned from his visit to Europe and America in January 1916. The arrangements made for the administration of the State during his absence worked well under the control of Tika Paranjit Singh and the Chief Secretary, Khan Sahib Mian Abdul Hamid, whose good services were rewarded by the title of Khan Bahadur.

The war.

28. The Maharaja's handsome contribution towards the maintenance of his Imperial Service Troops on active service, referred to in last year's report, was supplemented by a further grant of half a lakh to defray extra expenses connected with them during the year 1916-17.

MANDI.

Area, 1,200 square miles; population, 181,110; approximate revenue, Rs. 5 lakhs; army and police, 360; Raja, Jogendra Sen, Rajput Mandal; minor; salute, 11 guns; tribute, Rs. 1,00,000.

Personal.

29. Raja Jogendra Sen remained throughout the year at Queen Mary's College, Lahore, where he made satisfactory progress in his education.

Administration.

30. Mr. Emerson, the Superintendent, was absent from the State from October 1915 until January 1916, and Mr. Fyson, Assistant Commissioner of Kulu, acted as Superintendent in addition to his own duties. The improvement in the administration continues to be most satisfactory. The management of the salt quarries at Guma and Drang was taken over by the Darbar in July 1915 with excellent results. The value of the salt excavated increased during the year by a third, with a corresponding profit to Government, who levy a due upon the sale of the output.

SUKET.

Area, 420 square miles; population, 54,928; approximate revenue, Rs. 2½ lakhs; army and police, 78; Raja, Bhim Sen, Rajput; aged 31; has no male heir; salute, 11 guns; tribute, Rs. 11,000.

Personal.

31. The Raja, who towards the close of the year was in poor health, spent some time at Lahore and Bombay under medical treatment. He visited Simla on his way back to Suket.

IV.—LAHORE DIVISION.

CHAMBA STATE.

Area, 3,216 square miles; population, 135,873; approximate revenue, Rs. 3,89,000; army and police, 419; Raja, Sir Bhure Singh, K.C.S.I., C.I.E., Rajput; has male heir; aged 47; salute, 11 guns; tribute, Rs. 2,225.

Personal and administration.

32. Mian Tej Singh, son of the late Raja Sham Singh, died on the 28th of July 1915. His Highness' daughter was married in November to Sir Rajkumar Hari Singh, nephew of the Maharaja of Kashmir. Throughout the year Sir Bhure Singh ruled his State in his usual admirable manner. The previous lease of the working of the State forests having expired, His Highness secured better terms from new contractors. Arrangements were made for the annual inspection of the State hospital and jail by a medical officer from the Punjab with a view to sanitary advice.

33. The construction of a driving road from Ránikhet to Chamba an ambitious and very interesting project, is engaging the Raja's attention. His Highness interested himself most usefully in recruiting for the war.

V.—STATES OF THE AMBALA DIVISION.

SIRMUR (NAHAN).

Area, 1,198 square miles; population, 138,520; approximate revenue, Rs. 6 lakhs; army and police, 613; Raja, Sir Amar Prakash, K.C.S.I., Rajput; aged 27; has male heir; salute, 11 guns.

Personal and administration.

34. His Highness the Raja continued to supervise the administration of his State with wisdom and success. In September 1915 he visited Simla and was received at informal meetings by the Viceroy and the Lieutenant-Governor. His Honour the Lieutenant-Governor visited Nahan in October and presented the Raja with a new banner and the grant of the King-Emperor conferring upon His Highness the dignity of a Knight Commander of the Order of the Star of India.

The war.

35. The Imperial Service Sappers, which had done excellent work in Mesopotamia, were taken prisoners with General Townshend's force in Kut, with the exception of a small portion of the Corps which was at the base when Kut fell. The Chief and his relations have been liberal in their donations to the various war funds and in April 1915 Government accepted the offer by the Darbar of a number of hospital tents.

KALSIA.

Area, 168 square miles; population, 55,909; approximate revenue, Rs. 2,60,000; army and police, 163; Raja, Ravi Sher Singh, Jat; aged 13; no male heir.

Personal and administration.

36. The hereditary title of Raja was conferred on the Chief during the year. He made good progress in his education at the Aitchison Chiefs' College, and spent the summer months at Mussoorie. The Council's administration continues to give satisfaction. The land revenue settlement of the State was completed in September 1915 and resulted in an increase of about 18 per cent. on the previous assessment.

The war.

37. During the year the State contributed nearly half a lakh of rupees to funds connected with war and invested approximately Rs. 17,000 in the 4 per cent. Government loan.

PATAUDI.

Area, 52 square miles; population, 19,543; approximate revenue, Rs. 1 lakh; army and police, 77; Nawab, Muhammad Ibrahim Ali Khan, Bahadur, Pathan; aged 28; has a male heir.

Personal and administration.

38. The Nawab was granted administrative powers with certain restrictions in February 1916. Khan Bahadur Mir Nasir Ali remains his Chief Minister. The Chief subscribed Rs. 10,000 to the Punjab Aeroplane Fund during the year.

LOHARU.

Area, 224 square miles; population, 18,597; approximate revenue, Rs. 88,000; army and police, 80; Nawab, Sir Amir-ud-din Ahmad Khan, Bahadur, K.C.I.E., Moghal; aged 56; has a male heir; personal salute, 9 guns.

Personal and administration.

39. Sir Amir-ud-din Ahmad Khan visited Simla in September 1915, and in October went to Basra on special duty under the Resident. Unfortunately his work there was cut short by ill-health and he returned to India. His youngest son Mirza Itizaz-ud-din Ahmad Khan has entered the Mayo College at Ajmere whose climate suits him better than that of Lahore. The heir-apparent Mirza Aziz-ud-din Ahmad Khan is dealing successfully with the State finances.

DUJANA.

Area, 100 square miles; population, 25,485; approximate revenue, Rs. 77,170; army and police, 145; Nawab, Muhammad Khurshaid Ali Khan, Bahadur, Pathan; aged 31; has a male heir; tribute, 50 cavalry on requirement.

Personal.

40. The administration was carried on by the Nawab. In October 1915 he attended a Divisional Darbar at Ambala held by the Lieutenant-Governor, at which the Chief of Pataudi was also present.

VI.—STATES UNDER THE POLITICAL CONTROL OF THE SUPERINTENDENT, HILL STATES, SIMLA.

41. The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles including tendatories.	Population in 1911.	Approximate revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.	Remarks.
				Rs.	Rs.							
1	Bilaspur ...	448	93,107	8,33,425	8,000	Bijai Chand, C.S.I....	Rajput	43	Raja ...	Yes	204	
2	Bashahr ...	3,820	38,957	1,44,442	3,945	Padam Singh ...	Do.	42	Do. ...	Yes (adopted)	13	
3	Nalagarh ...	256	49,230	1,57,460	5,000	Jogindar Singh ...	Do.	46	Do. ...	No	48	Tributaries of Bashahr.
4	Keonthal ...	116	24,570	1,00,971	...	Hamendar Sen ...	Do.	11	Do. ...	No	36	
5	Baghal ...	124	26,008	68,976	3,600	Bikram Singh ...	Do.	23	Do. ...	Yes	25	
6	Bhagat ...	36	8,797	50,000	132	Durga Singh ...	Do.	14	Rana ...	No	43	
7	Jubbal ...	288	23,727	1,98,063	2,520	Bhagat Chand ...	Do.	27	Do. ...	Yes	19	
8	Kumharsain...	90	12,219	30,000	2,000	Vidyadhar Singh ...	Do.	21	Do. ...	No	7	Tributaries of Keonthal.
9	Bhajji ...	96	14,972	33,504	1,440	Bir Pal ...	Do.	10	Do. ...	No	32	
10	Mailog ...	43	8,663	37,783	1,440	Durga Chand ...	Do.	18	Thakur ...	No	16	
11	Balsan ...	52	6,225	18,500	1,080	Bir Singh ...	Do.	52	Rana ...	Yes	... 25	
12	Dhami ...	26	4,484	30,000	720	Hira Singh, C.I.E. ...	Do.	39	Do. ...	Yes	8	
13	Kothar ...	20	4,016	17,000	1,100	Jagjit Chand ...	Do.	29	Do. ...	Yes	9	
14	Kunihar ...	80	2,208	6,000	180	Hardeo Singh ...	Do.	18	Thakur ...	No		Tributaries of Jubbal.
15	Mangal ...	12	1,267	1,000	72	Tiok Singh ...	Do.	65	Rana ...	Yes	... 8	
16	Bija ...	4	1,064	5,000	124	Puran Chand ...	Do.	20	Thakur ...	Yes		
17	Dharkuti ...	8	521	1,200	...	Ram Saran Singh ...	Do.	73	Rana ...	Yes	... ...	
18	Taroch ...	67	4,493	50,000	288	Surat Singh ...	Do.	29	Thakur ...	Yes	... ...	
19	Sungri ...	16	3,022	2,743	...	Hira Singh ...	Do.	65	Rai ...	Yes	... ...	
20	Kaneti ...	19	2,854	8,590	...	Amog Chand ...	Do.	25	Thakur ...	No	... ...	
21	Delath ...	42	1,332	2,743	...	Narindar Singh ...	Do.	66	Do. ...	Yes	... 56	
22	Koti ...	50	8,265	44,154	...	Raghbir Chand ...	Do.	56	Rana ...	Yes	8	
23	Theog ...	144	6,845	14,391	...	Padam Chand ...	Do.	30	Thakur ...	Yes	6	
24	Madhan ...	9	3,901	5,500	...	Randhir Chand ...	Do.	29	Do. ...	No		Tributaries of Keonthal.
25	Ghond ...	28	1,887	5,610	...	Ranjit Singh ...	Do.	33	Do. ...	Yes	... ...	
26	Katesh ...	12	472	700	...	Hira Singh ...	Do.	48	Do. ...	Yes	... ...	
27	Rawin ...	7	749	4,521	...	Kidar Singh ...	Do.	39	Do. ...	Yes	... ...	
28	Dhadi ...	25	244	1,600	...	Dharm Singh ...	Do.	28	Do. ...	Yes	... ...	

42. *Bashahr.*—Raja Padam Singh, who succeeded his adoptive father as Raja of Bashahr in 1914, steadily established his position in the State and gained experience in administration under the guidance of Mr. Mitchell, I.C.S. His son joined the Aitchison Chiefs' College where he did well.

43. *Keonthal.*—Raja Bijai Sen of Keonthal died in February 1916 and Government recognised the succession of his heir Tikka Hamendar Singh, a boy of 13, who is being educated at the Chiefs' College. Rai Sahib Mian Amar Singh, the Financial Manager, carried on the administration. In spite of poor harvests the new assessment worked smoothly.

44. *Jubbal.*—The management of the valuable forests in Jubbal State was made over to the Rana.

45. *Kumharsain.*—Tikka Vidyadhar Singh was formally installed as Rana of Kumharsain in November 1915. In January his heir, an infant, two months old, died. The Rana's health was poor throughout the year.

46. *Dhami.*—A regular settlement of Dhami State was begun by the Rana.

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47. *Kunihar.*—Thakur Hardeo Singh was installed as Thakur of Kunihar with powers of administration.

48. *Koti.*—Survey work for the land revenue settlement of the State was completed in Koti.

FRONTIER AFFAIRS.

49. The failure of the kharif harvest of 1915 led to a slight increase in crime along the border. The peace of the frontier was for a time disturbed by a feud between sections of the Gurchani and Bugti tribes and by two serious dacoities, the work of gangs from outside the Province. One of these gangs inflicted some loss upon the Baloch Levy who followed it up. The quarrel between the tribes has been happily settled and the dacoities are under investigation in the North-West Frontier Province. On the whole the tumans have behaved well, while the work done by the jirgas was, as usual, very satisfactory. Among the cases most usefully decided by jirga was a long-standing dispute between the Mazari and Drishak tribes, regarding some land upon their borders. The case, which was nearly fifty years' old, had been decided by a Civil Court a generation ago, but demarcation by the Settlement Officer in 1896 had led to its revival. At a Darbar at Dera Ghazi Khan in November 1915, His Honour the Lieutenant-Governor installed Sardar Lashkar Khan as Chief of the Gurchani tuman, instead of his father Nawab Jallab Khan, C.I.E., who died in October. Nawab Jallab Khan was a strong and able Chief of a somewhat turbulent tribe.

50. Nawab the Hon'ble Sir Bahram Khan, K.C.I.E., Mazari Chief, continued his valuable aid to Government as Chairman of the Chiefs' Jirga, leading tumandar, and administrator of the affairs of his own important tribe. Sardar Din Muhammad Khan was appointed a C.I.E., in recognition of his excellent services while acting as Chief of the Leghari tuman during the minority of his kinsman, the titular tumandar, Sardar Jamal Khan. Sardar Paind Khan, who is managing the affairs of the Bozdar tuman on behalf of his aged and infirm father, is slowly but successfully consolidating his authority, in spite of the pressure of difficulties caused by the misguided action of his brother Sardar Fakir Khan. Convicted by Jirga in March 1915 of instigating dacoities Sardar Fakir Khan was released from imprisonment the following February by the Lieutenant-Governor in response to a plea for mercy submitted by the tumandars on conditions subjecting him to strict surveillance by the Commissioner of the Multan Division.

9.—Condition of the People.

[For information regarding this section *vide*—

Administration Report for the year 1911-12, paragraph 249.

Moral and Material Progress Report for the years 1901-02 to 1912-13 and Chapter VI below.]

Condition of the people.

51. The population in all the districts of the Province except Simla has increased in the last five years and the Provincial total at the close of the year was 6 per cent. over the Census returns for 1911. But for plague, which was responsible for a death-rate of 11·48 per *mille*, the year would have been a healthy one and, excluding deaths from this disease, the death-rate was lower than it had ever been since 1877. The birth-rate, though less satisfactory, compared favourably with the average of the previous five years.

52. The prosperity of the agricultural population was not on the whole seriously shaken from any cause, the war not excepted. The level of wages was maintained and there was no lack of employment for those that needed it, if not in the home district, at any rate in others. In a few districts labour was scarce owing to heavy enlistment for the army and occasional complaints were heard of the high rates demanded by agricultural labourers. The loss suffered by cultivators in the previous year owing to the slump in cotton prices was to some extent made good by a general rise in prices in the year under report.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this Chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the Revenue.— } Report on the Land Revenue Administration of the Punjab for the agricultural year 1st October 1914 to 30th September 1915.

Revenue Surveys and Settlements.— }

Professional Surveys.—General Report on the operations of the Survey of India for the year ending 30th September 1915.

Land Records.—Report on the Operations of the Department of Land Records, Punjab, for the year ending 30th September 1915.

Waste Lands and Government Estates.— 1. Annual Report for the Colonies for the year ending 30th September 1915.
2. Land Revenue Report, *as above.*

Wards Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1915.

Revenue and rent-paying classes.—Land Revenue Report, *as above.*

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I—

Area Totals—Table 1 J.	Transfers of Land—Table 6 H.
Classification of Area—Table 2 I.	
Incidence of Land Revenue—Table 5 I.	Changes in Boundaries—Appendix B.

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and collections.

53. The demand for the year on account of fixed land revenue was Rs. 2,17,04,451 or Rs. 4,84,911 more than the demand of the preceding year. Re-assessments in the districts of Ferozepore, Lahore, Amritsar and Sialkot accounted for an increase of Rs. 2,92,997 and deferred enhancements in Rohtak, Gurgaon and Karnal for Rs. 1,45,262. Of the total demand put down for collection more than 99 per cent. was collected. Heavy hail-storms and the failure of the monsoon in the latter part of August and the beginning of September necessitated the suspension of Rs. 47,070 in Gurgaon, and Rs. 36,865 were suspended in Gurdaspur, chiefly owing to the damage done by heavy floods in the Beas and the Ravi. The total amount suspended was, however, only Rs. 1,41,957, as compared with an average of about Rs. 5 lakhs, while remissions amounted to less than Rs. 43,000, or scarcely more than half the sum remitted last year. Collections on account of previous years amounted to over 7½ lakhs. Half a lakh of revenue already under suspension was remitted, chiefly in Hissar, Gurgaon, Rohtak, Jhelum and Attock. The recoverable balance on account of previous years not under suspension at the end of the year was only Rs. 318. The total amount under suspension fell to Rs. 3,78,020, a level only once reached during the last 10 years. The account is clear in ten districts and almost clear in six more. The total outstanding balance at the beginning of the year was Rs. 12,15,200 and at the close Rs. 5,92,620.

Riverain action.

54. The loss due to river action was on the whole greater than the gain by alluvion or improvement by deposit of silt, and for this the abnormal autumn floods were chiefly responsible. 42,692 acres were diluviated and the assessment on 36,687 acres was reduced on account of deterioration, while only 38,953 acres alluviated were newly assessed and the demand was enhanced on account of improvement on 34,303 acres. There was however a slight net addition to the fixed revenue roll of Rs. 25,056.

FLUCTUATING LAND REVENUE.

Demand and collections.

55. The demand on account of true fluctuating land revenue rose by more than ten lakhs to over 128 lakhs. This very

ADMINISTRATION OF THE LAND.

large increase was in the main due to re-assessment, the extension of canal irrigation and an unusually favourable season. Fifty-eight villages on the fringe of the Lyallpur district were assessed and enhanced water advantage rates were introduced in Ferozepore and Lahore. The extension of canal irrigation from the Upper Chenab canal in Sialkot and Gujranwala and from the Lower Bari Doab canal in Montgomery and Multan swelled the fluctuating collections. The increase was over 2 lakhs in Montgomery and 3 lakhs in Multan, while in Mianwali, owing to the extension of gram cultivation, the demand was Rs. 4,17,647 as compared with an average of slightly over Rs. 3 lakhs. In Hissar, where the average amount realised is Rs. 59,000, collections exceeded Rs. 99,000. The year was one of unusual prosperity in the villages under fluctuating assessment and the demand was everywhere collected with ease. The recoverable demand left uncollected at the close of the year was trifling in amount. Of last year's balance Rs. 7,726 were remitted and Rs. 22,116 collected, leaving only Rs. 20,000 outstanding on account of both the current and previous years.

Other Land Revenue.

Demand and collections.

56. The demand on account of other land revenue was Rs. 42,12,398 or about 7 lakhs less than in the preceding year. The chief falling off was under the head "Sale of Government estates," due to the natural decrease in the number of sales of proprietary rights to colonists on the Lower Chenab canal. The decrease of nearly Rs. 16 lakhs under this head was only partially counterbalanced by the increase in the sales of waste lands and town sites and the large extension of temporary cultivating leases in the Lower Bari Doab colony.

Miscellaneous

57. The number of coercive processes for the collection of land revenue rose from 12,497 to 17,952 and the amount of arrears for the realization of which they issued from Rs. 9,67,427 to Rs. 14,50,217, of which 93·4 per cent. was recovered. Out of the total collected in this way over Rs. 7½ lakhs were collected in the Multan division. A portion of the increase is no doubt due to the larger demand for collection during the year, but there were also special causes, such as the disturbances in Jhang, to which the increase in that district is partly ascribed. The main explanation, however, is the increased attention paid to punctuality in payment. Practically the only processes employed were writs of demand, warrants of arrest, and warrants for the distress or sale of moveable property. Writs of demand accounted for 69 per cent. of the processes. 2,819 processes were executed, and led to arrest in 2,304 cases, chiefly in Lahore, Gurdaspur, Gujranwala, Jhang, Multan and Muzaffargarh. Rs. 19½ lakhs of land revenue were paid in through the Post Office in twenty-five districts. Only Rs. 3,360 were remitted in currency notes. In the Rawalpindi division an experiment in the collection of land revenue on dates fixed for each village on a regular roster was initiated.

11.—Professional Surveys.

Surveys.

58. Survey work was carried on by the Riverain Detachment of the Survey Department on the Sutlej and Chenab rivers and in Kangra and Simla districts. The work on the Sutlej consisted in laying down a traverse for the field measurements in low-lying tracts in the Phillaur and Nawashahr tahsils of Jullundur district. A similar operation was completed for the riverain villages on the Chenab in the Phalia tahsil of Gujrat district. Altogether 231 square miles were traversed at a cost of Rs. 22,865. The special traverse of the Kangra tahsil, covering 494 square miles, was completed at a cost of Rs. 58,610. In Simla district the peculiar difficulty of the country made survey work expensive, the cost of the traverse of 53 square miles amounting to Rs. 8,992. Topographical survey operations were continued in Hissar, Rohtak and Gurgaon districts.

Boundary delimitation.

59. Important work connected with the provincial boundary with the United Provinces, referred to in last year's report, was carried out on the Jumna river. An agreement was secured to a permanent boundary of

proprietary right for half the length of the boundary and proposals were made for compulsory demarcation of the remainder by legislation. The principle of compulsory determination of a fixed boundary was accepted by the Punjab Government, and is now under consideration by the Government of the United Provinces.

60. Certain disputes regarding the boundary between Jammu and the Gurdaspur and Sialkot districts were settled by agreement between the Settlement Commissioner of Kashmir and the district officers concerned.

12.—Revenue Surveys and Settlements.

61. At the beginning of the year 10 settlements were in progress. At its close measurements and record work remained to be done in four and from only three were assessment reports due. The Settlement Officers of Sialkot, Lahore and Shahpur completed the records of their districts, and in each the introduction of the new assessment in one tahsil is all that is left to be done. In Gujrat the field measurements in the Jhelum riverain area were completed and those of the Chenab riverain begun. There was little measurement of this kind remaining, but the necessity for a special quadrennial attestation of the *jamabandis* added to the work of the settlement. *Kilabandi* work was delayed by plague and in other ways, and was not complete at the end of the year. Good progress was made with record work in Jullundur and Simla. In the former measurements were completed. Record work was nearly finished in the Jullundur and Nakodar tahsils and good progress was made with it in the rest of the district. The changing of Settlement Officers owing to their ill-health caused some disorganization and retarded the progress of settlement work in Kangra. Assessment reports were submitted for Palampur, Jullundur, Nakodar, Lahore, Zafarwal, Phalia and Khushab tahsils. Reports were also submitted for the Bharauli tract of Simla district, Simla town lands, Lahore town lands and the Saidwala tract transferred from Montgomery to Lyallpur. The new demand was announced in Jullundur, Chunian, Fazilka, Zafarwal, Kharian and Khushab and its distribution completed in most of these tahsils. The duration and cost of each of these settlements and the enhancements taken in each will be found in Statements XIII and XIV appended to the Punjab Land Revenue Report. Final settlement reports for Lyallpur, Ferozepore, Una tahsil and the rest of Hoshiarpur were submitted during the year. Sanction was given during the year to the beginning of the settlement of Ambala which accordingly started in October 1915. The scheme of operations printed in Appendix V of the Punjab Settlement Manual has been revised for another quinquennium and it is expected that in each of the two years 1916-17 and 1917-18 one new settlement will be begun and three current settlements brought to an end.

13.—Land Records.

62. The experiment, mentioned in the report for 1914-15, of utilising canal patwaris for revenue record work was continued in Lyallpur and Shahpur districts and was extended to Gujrat. The comparative excellence of the work of the patwari establishment was again noticeable. **Patwaris.**

63. The relief afforded to tahsildars and their deputies by the attestation of mutations in cases of undisputed inheritance by selected field kanungos was so minute, the number of mutations so sanctioned amounting to only 2 per cent. of the whole, as to raise considerable doubts regarding the wisdom of continuing the experiment, more especially as the kanungos' proper work was found to suffer in quality and quantity. In accordance with a recommendation of the Clerical Establishments Committee the touring of head-quarter kanungos of the Gurgaon, Hoshiarpur and Mianwali districts was stopped experimentally. The effect will not be evident for some time. **Kanungos.**

64. Record work was completed during the year in Ferozepore district and for the Dehra-Una settlement, and reached the final stages in **Records.**

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Sialkot, Lahore, Gujrat and Shahpur districts. Settlement operations were in progress in the Jullundur and Simla districts and in the Kangra, Palampur and Nurpur tahsils of the Kangra district. *Killabandi* work was also carried out in the Gujrat and Montgomery districts.

14.—Waste Land and Government Estates.

Progress of Colonization in the old colonies.

65. Out of a total of 2,580,176 available acres in the Lower Chenab, Lower Jhelum and Chunian colonies, 179,560 acres remained unallotted at the close of the revenue year. This area was, for the most part, land reserved for grazing grounds. Land otherwise free for disposal was sold at full market rates. The revenue settlements of the three colonies were completed, and future re-assessments will take place in the ordinary routine of settlement procedure. The colonies are supplied with communications, schools, markets and other amenities of civilization on a scale at least as generous as that of other districts of the province. Approximately 2,510,000 acres, or nearly cent. per cent. of the permanently allotted area, were sown a degree of cultivation as high as the land can carry.

Service conditions.

66. Mule-breeding is becoming more popular in the Chenab colony, where, in the Lyallpur district alone, the Army Remount Department bought the unprecedented number of 1,076 mules during the year. The difficulty of enforcing mule-breeding conditions on those bound by them decreased proportionately, and out of 1,133 lambardars so bound in Lyallpur only five were without mares. Three of the grantee camel corps were mobilised without great difficulty. The Lower Jhelum report showed steady progress in horse-breeding. Four hundred and thirty-eight remounts were purchased, a rise on last year's figures, though still less than the colony might be expected to produce.

The Lower Bari Doab.

67. The auctions of 1915 realised an average price of Rs. 188 per acre. This was considerably less than that of the preceding auction, a result due perhaps in part to the war, but also to the fact that in 1914 many persons bought what they could not pay for in the expectation that the profits of the following harvests would provide the wherewithal to meet the purchase instalments.

68. Eight regimental horse farms and three cattle farms were allotted, but the greatest part of the Colonization Officer's work lay in the allotment of peasant grants, amounting to 126,500 acres. Over 15,000 colonists had been given land permanently by the end of the year. The area cultivated rose from 34,669 to 137,909 acres. Of this 81,814 acres were sown for the *kharif* harvest. Water was not guaranteed for the *rabi* harvest but some was given.

Towns and Roads.

69. Plans were completed in conformity with the recommendations of the town planning committee for the extension of the towns of Montgomery and Okara, and the creation of new towns at Khanewal and Chichawatni. Two hundred and sixty-nine sites measuring $10\frac{3}{4}$ acres were sold at Okara for Rs. 2,28,930. Satisfactory progress was made with communications in the Montgomery district, where 157 miles of unmetalled roads were added to the 150 mentioned in last year's report, and five miles were metalled. A start has also been made in arboriculture.

Upper Chenab Canal.

70. Allotment in the Upper Chenab colony began during the year and 41,340 acres were disposed of. Of this area 13,723 acres receive irrigation only in the *kharif* harvest, and were distributed to peasants of the Gujranwala and Sialkot districts, whose lands had suffered from river action or through the construction of the canal. The land was reported to be of inferior quality, and in view of its unsuitability for *rabi* crops it was a matter of some doubt whether it could be successfully colonised. Of the perennially irrigated area 11,742 acres were sold by auction, at an average price of Rs. 179 per acre in the Lyallpur district and Rs. 154 in Gujranwala. About 3,000 acres were originally reserved for regimental horse farms, but one of these has since been transferred to the Lower Bari Doab. Twelve thousand nine hundred and

eleven acres were allotted to disappointed Jhelum grantees. Only a little temporary cultivation was attempted as the Upper Jhelum canal still awaited completion.

15.—Wards' Estates.

71. Two estates and a portion of a third were released by the Court-of-Wards during the year, and two taken over. The Sheikhupura estate which had been taken under superintendence in 1900, was partitioned between the three owners, two of the shares being released and one brought separately under the court. When taken under management the estate was burdened with debts amounting to over Rs. 6½ lakhs. These have been paid off and the assets of the estate increased by Rs. 2½ lakhs. The cultivated area of the property increased during management by nearly 70 per cent. Three estates were under the guardianship of district officers under the Guardian and Wards Act. Over Rs. 6 lakhs were invested by the Court-of-Wards in land, and over a lakh and a half in the 4½ per cent. Government Loan. A central co-operative society was established at Mamdot with the object of financing village societies among the Nawab's tenants. The court spent two lakhs on permanent improvements during the year. An enquiry was made into the management of the horse and cattle farms of the Mamdot estate and orders passed for its improvement. The Kot horse-breeding stud took 16 prizes at the Rawalpindi horse-show, and an experimental farm was started on this estate. The farms of the Mamdot and Guru Har Sahai estates did useful work. The accounts of 22 estates were audited during the year with satisfactory results.

16.—Revenue and rent-paying classes.

72. The causes of the variations in the cultivated area noticed last year have been investigated. For two districts the returns were found to be erroneous and were corrected; in the others the variations were attributed either to statistical inaccuracies or to vicissitudes of season during the year 1913-14. The compilation of the new returns brought to light a discrepancy of nearly 500,000 acres of cultivated land in the previous returns from Shahpur, and it is therefore necessary to exclude that district from consideration in calculating the increase in cultivation. In the remaining districts of the province the total increase in cultivated area brought on record amounted to 111,279 acres. The increase is general. The same proportion of the cultivated area, as in the preceding year, namely, 11½ per cent., was under mortgage. The proportion held by mortgagees of non-agricultural tribes has fallen slightly and is now 5 per cent. General.

73. The demand for loans for land improvement abated greatly during the year, the amount advanced, Rs. 1,88,880, being little more than half the sum borrowed in the year before. The explanation is said to lie in the high prices and the consequent credit prevailing in the country, which made loans easy in the open market. The expenditure on wells, though less than in 1914-15, exceeded the normal, in Ferozepore district in particular, where the introduction of the iron Persian wheel led to a sudden increase of wells, taking over Rs. 70,000 for improvements of all kinds. For the purchase of seed and cattle approximately the same amount was borrowed in the preceding year. Loans Act.

74. The main feature of the transfer statistics of the year is the decrease in the area affected by mortgages and redemptions. The cultivated area in which the proprietary rights were sold rose from 121,809 acres in the preceding year to 133,933 acres, but the latter figure is abnormally inflated by the inclusion of over 17,000 acres sold from the Skinner estate in Hissar. Mortgages of proprietary right were created on 228,668 acres and extinguished on 239,644 acres, the corresponding figures last year having been 245,631 and 282,290 acres respectively. There was a large increase of transactions of all kinds in Lahore and Sialkot districts where settlement operations were approaching conclusion and an appreciable increase in Gujranwala, Montgomery and Lyallpur. Transfers.

ADMINISTRATION OF THE LAND.

Value of land.

75. The selling value of cultivated land in the previous year was obscured by the magnitude of the sums spent in acquiring land in the suburbs of Lahore. Here over a crore of rupees was spent on the purchase of 3,335 acres of which 2,204 were cultivated. During the year now under report, there was a cessation of speculation in the city, and the sum spent was under 29 lakhs although the area sold increased to 4,955 acres (including 3,637 acres cultivated). The all-round sale price of land fell accordingly from Rs. 249 per acre of cultivation to Rs. 180, a rate which is, however, much in excess of any rate prevailing before 1913. From almost every district in which the statistics are not affected by urban speculation a rise in the value of land is reported, and it is clear that the appreciation of the value of land devoted to agriculture continued unchecked. The increase in the consideration for which land was mortgaged from an average rate of Rs. 124 per cultivated acre in 1913-14 to Rs. 130 in the current year, corroborates this conclusion.

Land Alienation Act.

76. The year was uneventful so far as the Land Alienation Act was concerned. The only new tribes notified were the Biloches of Ferozepore and the Sainis of Gujranwala. *Benami* transactions and misdescription of caste or tribe were still the commonest expedients for evading the Act. Claims to membership of agricultural tribes caused a great deal of work in Sialkot, but generally the amount of work thrown on the district establishment by the Act was not considerable. In Lyallpur almost half the temporary alienations were in favour of non-agriculturists and in forms permitted by the Act, and the same was the case in Jhang. It is a fair inference that evasion of the Act is generally either impracticable or unprofitable. Alienations during the year resulted favourably, on the whole, for agricultural tribes. They bought 8,498 more acres than they sold. On the other hand they pledged 28,270 more acres than they took on mortgage, and as the area redeemed by them exceeded by only 5,881 acres the area on which they created new mortgages, the rate of relief was lower than in any year during the previous decade.

Rent-paying classes.

77. The volume of litigation for the adjustment of the rents of occupancy tenants was less than in any year since 1906. Of 1,308 suits for enhancement 1,090 were successful. There were only 8 suits for reduction. Almost a third of the cases were tried in Gujrat where the great number of petitions was due to the announcement of the new demand in the Gujrat and Kharian tahsils. Elsewhere the number of suits declined towards its normal level with the completion of settlement operations. Litigation for the ejectment of tenants with rights of occupancy was also less than in previous years. Proceedings against or by tenants-at-will were normal in number. Applications for the service of notice fell from 13,417 to 11,920, and the notices issued from 30,019 to 26,971, but the ejectments made rose from 5,671 to 6,099. Proceedings were comparatively rare in the Rawalpindi and Multan divisions, and even in the districts where recourse to the courts is more frequent, the relations between landlords and tenants remained cordial.

MISCELLANEOUS.

Descent of Jagirs Act.

78. Only one declaration of a rule of integral descent was notified in the year, the annual value of the assignment being Rs. 3,420. Of 553 assignments notifiable in the province, 143 have been notified under the Descent of Jagirs Act.

Punjab Land Preservation (Chos) Act.

79. Measures for the protection of land from the action of streams and torrents under section 4 of the Punjab Land Preservation Act were extended in the Ambala district where, at the end of the year, areas in 22 villages were under regulation. A record-of-rights was prepared for the areas in the district notified under the Act and action taken towards compensating the people for restrictions imposed. The improved appearance of the western slopes of the Siwalik hills testifies to the wisdom and success of the Act.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—,

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1915.

(2) Report on the working of the Criminal Tribes Act for the year 1915.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1915.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1915.

Prisons.—Report on the Administration of the Jails in the Punjab, 1915.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1915.

Registration.—Note on the Registration Returns of the Punjab for the year 1915.

Legal affairs of Government—Report on the Administration of the legal affairs of the Government of the Punjab for the year 1915.

Local Boards Administration.—Report on the Administration and accounts of the District Boards in the Punjab for the year 1915-16.

Municipal Administration—Report on the working of Municipalities in the Punjab during the year 1915-16.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical abstract for British India, Volume IV, Administrative and Judicial (including area, population and local funds).

17.—Legislating Authority during the year 1915-16.

80. The following changes took place amongst the Hon'ble Members of the Council :—

1. The Hon'ble Khan Zulfiqar Ali Khan, C.S.I., of Máler Kotla, was nominated in place of the Hon'ble Sardar Daljit Singh, C.S.I., resigned.

2. The Hon'ble Sir Edward Maclagan, K.C.I.E., C.S.I., was nominated in place of Mr. Mant, resigned on proceeding on leave.

3. The Hon'ble Colonel H. Hendley was nominated as a specialist.

4. The Hon'ble Raizada Bhagat Ram was nominated in place of the Hon'ble Mian Muhammad Shafi who resigned his seat on being elected to the Imperial Council.

5. The Hon'ble Mr. E. W. Parker was nominated in place of Sir Arthur Ker, Kt., C.I.E., deceased.

6. The Hon'ble Mr. T. R. J. Ward, C.I.E., M.V.O., M.I.C.E., was nominated in place of Colonel Maclagan, C.B., C.S.I., resigned.

7. The Hon'ble Mr. O. F. Lumsden was nominated in place of Sir Michael Fenton, resigned on proceeding on leave.

8. The Hon'ble Mr. H. D. Craik was nominated in place of Mr. J. P. Thompson, resigned on proceeding on leave.

9. The Hon'ble Sir E. Maclagan resigned his seat.

18.—Course of Legislation for the year 1915-16.

81. Four meetings of the Legislative Council were held during the year under report—three in Lahore and one in Simla.

Three Bills, *viz.*, (1) a Bill to make better provision for the impressment of Animals, Vehicles, Boats and Gear in the Punjab, (2) a Bill for the registration of Medical Practitioners, and (3) a Bill further to amend the Punjab District Boards Act, 1883, were introduced in Council during the year. The first received the assent of His Excellency the Viceroy on the 24th January 1916 and has become law as Punjab Act I of 1916. The second was passed by the Council in April 1916 and received the assent in May 1916. The third remained pending.

Out of the following five resolutions—

(1) Resolution *re* Sanitation of New Colonies,
(2) Resolution that the strength of the Punjab Legislative Council be raised to its full limit,
(3) Resolution *re* Promotion of Industries,
(4) Resolution on Thikri Pahra,
(5) Resolution recommending an increase in the number of Primary Schools by reduction in cost of Direction and Inspection,

the first three were withdrawn, the fourth was carried and passed, while the fifth was lost.

One hundred and forty-three questions were put and answered.

India Acts.

82. The Acts of the Imperial Council, more particularly affecting the Province passed during the year, are—

(1) The Repealing and Amending Act, 1915 (XI of 1915).
(2) The Indian Soldiers (Litigation) Act, 1915 (XII of 1915).
(3) The Enemy Trading Act, 1915 (XIV of 1915).
(4) The Indian Trusts (Amendment) Act, 1916 (I of 1916).
(5) The Defence of India (Amendment) Act, 1916 (II of 1916).
(6) The Foreigners' (Trial by Court-martial) Act, 1916 (III of 1916).
(7) The Indian Tariff (Amendment) Act, 1916 (IV of 1916).
(8) The Indian Income-tax (Amendment) Act, 1916 (V of 1916).
(9) The Indian Medical Degrees Act, 1916 (VII of 1916).
(10) The Presidency Banks (Amendment) Act, 1916 (VIII of 1916).
(11) The Indian Paper Currency (Temporary Amendment) Act, 1916 (IX of 1916).

19.—Police.

General Police Force.

General.

83. The gradual decrease in crime which has been such a satisfactory feature of the records of the last few years came to a check in the year under review. The political and economic unrest unavoidable during the continuance of war conditions, high prices, acute scarcity in the latter half of the year, and severe outbreaks of plague could not but stimulate the more disorderly elements of the community, and the resulting lawlessness expressed itself in the *Ghadr* Conspiracy and the dacoities which occurred in the spring of 1915 in the south-west of the province. In the circumstances, the increase in the number of cognizable cases dealt with by the police, putting aside offences under Local and Special Laws, from 34,061 to 35,597 was not disquietingly great. If all offences be included, the statistics actually show a reduction in cognizable cases of all kinds by 719.

84. But for the weapons forged under the special legislation of the Ingress into India Ordinance and Defence of India Act, violent crime would have been even more rampant. Thanks, however, to these measures, large numbers of potential criminals of desperate character were effectually disarmed by temporary restraints and the *Ghadr* and other lawless movements promptly quelled.

85. As in 1914 the hearty co-operation of the public with the police in the suppression of disorder was on many occasions, and particularly in connection with the conspiracy, a matter of congratulation. In several instances such co-operation was signalised by remarkable displays of unselfish loyalty, physical courage and resolution. The services thus rendered to the State were generously acknowleged by Government. Grants of land were made to 122 persons, land revenue amounting to over Rs. 10,000 was remitted to villages, and no less than 2,631 individuals, including village officers, shared in monetary rewards. On the other hand, a large number of cases were characterised by a lamentable lack of co-operation by people in a position to render aid on the side of law and order. In some there was deliberate connivance; in others indifference or neglect of duty by the leaders of the people, resulting in the deplorable crimes which brought ruin and misery on hundreds of homes and led to considerable additions to the punitive police forces quartered in the disturbed areas. On a broad view, however, there was much to prove that both the police and the people were realizing in an increasing measure the necessity of mutual co-operation for the prevention and detection of crime.

Murder and dacoity.

86. The number of murders dropped to 512, a decrease of nearly 5 per cent., from the previous figure, but the dacoities and disorder that occurred in the Jhang, Muzaffargarh and Multan Districts were unprecedented in the annals of the criminal administration of the province. The causes of this sudden outburst of lawlessness were varied and to some extent obscure, but while in some places the disturbances were attributable to local economic causes, elsewhere there were signs of a widespread belief that British rule was shaken and the time was ripe for the Muhammadan peasants to release themselves from all obligations to their Hindu creditors and to start afresh with a clean sheet and such loot as they could secure by spoiling their prosperous neighbours. This explains, besides other peculiar features of some of the dacoities, the pose of some of the raiders as Germans, a pose designed to create panic among their victims rather than indicative of any particular hostility to Government, whose property was left severely alone. This outbreak fully accounts for the increase in dacoities and robberies, of which there were 149 cases more than in the previous year.

Burglary and theft.

87. A moderate increase in the number of offences against property was to be expected in view of the high level of prices and severe plague of the first six months of the year, followed by a failure of the monsoon. But the serious prevalence of crime in the central districts which raised the number of burglaries by 1,702 above the previous figure was attributed chiefly to the invasion of the country by criminal tribesmen from other parts and the increased activity of the local criminal tribes under the stimulus of this influx. It is surprising that in the circumstances of the year the number of thefts was approximately the same as in the previous year. A further drop by 171 cases of the number of cattle thefts was a natural result of the continuing high price of fodder.

Police working.

88. Judged by the criterion of convictions obtained before the courts, the working of the police exhibited a steady improvement. The one exception was in the case of murders, where there was a marked deterioration as compared with the results of the two previous years. Against this is to be set the percentage of success in dacoity prosecutions, which rose from 37 to 60.

Preventive action.

89. The difficulty in applying, and the inefficiency of, the provisions in the Criminal Procedure Code for placing habitual offenders on security

PROTECTION.

continued to be the subjects of complaint. It was proposed to deal with the defects of the system by a special Bill. On the other hand, the more energetic use of the section of the Code applicable to vagrants and suspected persons contributed materially towards prevention of crime. The continuing success of the indigenous system of village patrols mentioned last year was emphasized by the Legislative Council, who passed a resolution recommending its extended use.

Disregard of authority.

90. The disturbances on the south-west of the province and the conspiracy engineered by the *Ghadr* party have been referred to above. With regard to the former, it was noticeable that when the prominent men of the localities concerned took their stand on the side of the authorities, no serious disorder arose; but where the leaders of the people deliberately or negligently failed in their public duty, it was only where bodies of police got into touch with the malefactors and used their fire-arms with effect that trouble subsided. In dealing with the *Ghadr* movement in the Central Punjab the administration was fortunate in gaining the whole-hearted assistance of the more important men, and the police working skilfully and in close co-operation with the military authorities frustrated the plans of the anarchists completely. Nearly all the principal organisers and most active agents of the movement were brought to justice.

Criminal Investigation Department.

91. The full benefits accruing from the reorganization of the Criminal Investigation Department became apparent during a year of exceptional stress and strain. In dealing with the dangerous revolutionary movement the staff achieved eminent success. In this they were aided by the cordial and steadfast support, throughout the crisis, of the district and executive police officers, the ready assistance of the military authorities in the Lahore Divisional Area, and the thorough co-operation of the Darbars of the Native States. Government was also indebted to the committees of Sikh gentlemen who, at the cost of much personal trouble and risk, rendered loyal and invaluable services in watching and controlling the movements of thousands of returned emigrants dispersed throughout their districts.

Finger Print Bureau.

92. The work of the Finger Print Bureau reached record figures in the year under report. It was disposed of successfully.

Internal economy.

93. The actual strength of the permanent police force was slightly reduced owing to the transfer to the North-West Frontier Province of the officers and men employed on the frontier section of the railway. This reduction was more than counterbalanced by the employment of an additional body of 350 men as emergency police to cope with the abnormal conditions of the year. The enquiry into the distribution of the police of the province, mentioned in the last report, was successfully concluded and resulted in a saving of about 3 lakhs in existing and contemplated recurring charges.

Rural Police.

Miscellaneous.

94. During the year 15 zaildars, 431 village headmen and 420 watchmen were punished for neglecting their duties, while rewards for good services in criminal administration were granted to 442 headmen and 259 watchmen.

Criminal Tribes.

95. The activity of criminal tribesmen, immigrant and local, has been referred to in paragraph 87 above. An officer was specially deputed to elborate a comprehensive scheme for the settlement of wandering criminal tribes and gangs in the province.

Chemical Examiner.

96. There was a further substantial decline in the work of the Chemical Examiner during the year, the number of cases investigated being 1,488, with 4,942 articles, as against 1,833 cases and 5,511 articles recorded in 1914-15.

97. Opium continued to be the most common form of poison, and was found in 36 per cent. of the cases of human-poisoning detected. Arsenic was discovered in about 30 per cent. of the cases. The decrease of the use of this poison noticed in the previous year's report was not maintained. In cattle-poisoning cases, however, it was found both in fewer cases and in a smaller percentage of the total number of cases. A greater use was made of the services of the Imperial Serologist at Calcutta, but the number of blood-stain cases submitted to him was only about one-third of the number referred to the Chemical Examiner.

20.—Criminal Justice.

General.

98. The total number of reported offences has been steadily declining ever since the high water mark of criminal litigation was reached in 1912. In the year under report 202,220 offences were reported, or about 2,600 less than in 1915. Unfortunately these figures, though indicating a tendency for false and frivolous litigation to diminish, do not imply any true reduction in the amount of real crime, of which some of the more serious forms, such as robbery and dacoity, show a substantial increase. The causes of this increase are not far to seek, and have been alluded to in the previous section. The *Ghadr* Conspiracy and the dacoities of the South-Western Punjab resulting from political unrest led to offences sufficient by themselves to swell the ordinary tale of crime in the province. These were mostly dealt with by special tribunals constituted under the Defence of India Act. But in a year of plague and severe agricultural depression, it is not surprising that the amount of serious crime with no special political character was higher than in 1914. The efforts of the police and the magistracy to limit the scope of the influences making for disorder were on the whole wonderfully successful. Moreover, even in the statistics of serious crime there were re-assuring features. The decrease in murders has already been noted, while the number of cases of attempts to murder, culpable homicide and serious offences against the person generally fell by about 10 per cent.

Disposal of cases.

99. Of cases brought to trial, 73 per cent. resulted in conviction or compromise as in 1914, but there was a rise from 37 to 38 in the percentage of convictions, pointing to a progressive improvement in recent years. One hundred and forty-four death sentences were confirmed, or only 6 less than in 1914, when the number was the highest on record. As the figure for 1915 does not include the persons executed as the result of the first conspiracy trial conducted by the Lahore special tribunal, the number of executions carried out in 1915 was higher than in any previous year. During the last few years there has been less reluctance than formerly to impose the extreme penalty on convicted murderers, and this change has had a marked deterrent effect, and is probably one cause of the progressive decline in the number of murders. A remarkable feature of the year's work, in view of the many pressing pre-occupations of the year, was an increase in the number of serious cases disposed of by District Magistrates under section 30 of the Code of Criminal Procedure. Great assistance was rendered to the administration of justice by Honorary Magistrates, sitting singly and in Benches, who disposed of 31,000 cases or about 28 per cent. of the total number. The inadequate use made of the provisions of the Code of Criminal Procedure to dismiss complaints summarily and to award compensation in false and frivolous cases led to a suggestion for simplifying the procedure which has been communicated to the Government of India in connection with the contemplated revision of the Code.

Marriage registration.

100. Offences relating to marriage continued to decline steadily, though slowly, doubtless as the result of the registration system in force in many districts. Though unpopular among certain classes, the general opinion was that the system was efficacious in checking false cases, and the Lieutenant-Governor urged its extension to districts where it was not already in use.

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Special tribunals

101. Reference has been made to the special tribunals appointed under the Defence of India Act. Two such bodies were constituted, each consisting of three members. The Multán tribunal dealt with some of the most serious dacoities perpetrated in the south-west of the province early in 1915. It convicted 75 of the accused, inflicting punishments usually ranging from 5 to 10 years' imprisonment or transportation. The Lahore tribunal dealt with the first Lahore conspiracy case and its ramifications, all of which were off-shoots of the revolutionary movement inspired by the returned emigrants. Sixteen accused were sentenced to death and 50 to various terms of transportation and imprisonment.

21.—Prisons.

Institutions.

102. The formal conversion of the old Shahpur jail into a special institution for tuberculous prisoners and the transfer of the district jail functions of the Lahore district from the Borstal Central Jail to the local jail were completed during the year under report.

Accommodations.

103. The average number of prisoners to be provided for throughout the year was nearly 2,000 in excess of the number for which existing jails are designed. Overcrowding was relieved by confining prisoners at night in tents and workshops. The provision of an additional central jail has become a matter of considerable urgency and it is hoped to commence building one as soon as the financial situation permits

Admissions.

104. The number of admissions (50,039) and the average daily population showed increases of 25 and 12 per cent. over the previous year's figures. At the close of the year the number of convicts sentenced to transportation but still detained in the Punjab was 1,220 or 224 more than at the end of 1914.

Juveniles and Juvenile adults.

105. One hundred and twelve boys and 2 girls were sentenced to imprisonment as compared with 73 children last year, of these 6 were committed subsequently to the Reformatory School at Delhi. The Borstal Institute continues to develope. Public opinion in India has yet to realize the advantages and objects of the Borstal system, and the co-operation of philanthropic bodies and individuals with the authorities, so essential for its success, is rarely forthcoming in the Punjab where a wide field is open for individual philanthrophy in this connection.

Under-trial prisoners.

106. The number of under-trial prisoners admitted during the year reached the unprecedently high figure of 25,530 or 7,187 more than in 1914. The conspiracy case in the Central Punjab and the outbreak of dacoities in the south-west accounted for the greater part of this excess. Pressure of work in the Criminal Courts was severe, and it is no matter for surprise that the average period of detention rose from 23 to 25 days, the figure for 1913.

Discipline.

107. Twenty-one prisoners or 4 more than in 1914 escaped, but 13 of them were recaptured. That discipline was on the whole well maintained is proved by the fall of more than 3,000 in the number of jail offences, of which 24,492 were reported during the year. This is considerably less than half the number recorded seven years ago since when the decline has been steady and progressive. It is a matter of satisfaction that during a period when the provincial jails contained an unusually large number of reckless and dangerous criminals, this steady improvement should not have been interrupted.

Industries.

108. An increase in expenditure on guarding and maintenance from Rs. $11\frac{3}{4}$ to Rs. $13\frac{3}{4}$ lakhs is sufficiently accounted for by the larger number of prisoners and the high prices of foodstuffs and other articles. The average cost of each prisoner's maintenance rose from Rs. 78-3-7 to Rs. 82-12-11. Over Rs. 2 lakhs were spent on building operations.

Health.

109. The daily average number of convicts sentenced to labour rose from 13,350 to 14,510, but, owing to the purchase of costly machinery and tools, the rise in the cost of raw material, and the difficulty of providing remunerative labour for the exceptionally large number of

prisoners the profits from jail factories shewed a slight decrease of Rs. 2,306. The average earnings per head fell from Rs. 20-13-0 to Rs. 19-2-0.

Financial.

110. The number of prisoners admitted to hospital rose from 9,119 to 12,361. This was mainly due to the unhealthiness of the summer. Pneumonia claimed 109 deaths as against 51 deaths in 1914 and 2,592 prisoners suffered from malarial fever or nearly twice as many as in the year before. But the death rate for all the jails showed a decline, for which the segregation of tuberculous prisoners in a special jail was doubtless responsible, as the death rate from this disease fell from 8·24 to 4·97 per thousand. The improvement of the sanitary conditions in the jails was evidenced by the fact that in a year in which plague carried off nearly 250,000 persons, or one per cent. of the free population, and cholera was widespread over the province, there were only two deaths from plague and none from cholera among the jail population.

22.—Civil Justice.

Institutions.

111. The great war, which has affected to a greater or less extent nearly every branch of the administration, appears to have had but little disturbing influence on the activities of the Punjabi civil litigant. Nor did the unfavourable agricultural conditions have their usually restrictive effect on litigation. The number of suits instituted in 1915 was 199,166 or 3,900 more than in 1914 and about 7,000 above the average of the last 12 years. So large a volume of business had not been before the civil courts since 1912. Fortunately the rise in 1915 was entirely confined to the simplest class of suits, those for the recovery of money or movable property. Suits of greater complexity and value declined substantially. The actual burden of work thrown on the courts was in consequence lighter than in 1914.

Value of suits.

112. The rise in the value of suits noticeable in last year's report was not maintained, but the total value, Rs. 3,54,92,657, was still about Rs. 24,000 above the figure for 1913. The average value shrunk to Rs. 178 for the province and to Rs. 376 for Lahore.

Disposal of work.

113. The number of original suits for disposal rose from 238,966 to 244,555, that of suits disposed of from 207,584 to 209,720, and the number of the pending files from 31,382 to 34,835. The average duration of cases was 78 days for contested and 39 for uncontested original suits as compared with 74 and 51 days, respectively, in 1914, while the average duration of civil appeals rose from 141 to 164 days. The fact that nearly 1,000 suits were adjourned owing to the parties being absent on military service had no doubt considerable effect upon these statistics.

The Chief Court.

114. During the last few years there has been a progressive increase in the amount of civil work coming before the Chief Court. Institutions rose steadily and the number of first appeals, by far the heaviest class of cases instituted in 1915, was more than twice as many as in 1914. In the circumstances, the continuous increase in the number of disposals and the reduction in the pending file are proofs of the practical efficiency of the Court.

Execution.

115. The results of the year as a whole were not very favourable to the decree-holder applying for execution of his decree. The number of applications rose from 183,855 to 191,117 and the pending file showed 33,299 cases at the close of the year, the number at its opening having been 29,123. The percentage of realizations to claims was 26.

Insolvency Act.

116. Work under the Provincial Insolvency Act continued to increase. The proportion of persons discharged under section 44 of the Act becomes higher every year. The amount of creditors' claims unsatisfied at the close of the year was nearly 34 lakhs, while insolvents' assets were realized only to the extent of 3 lakhs. Both figures compare unfavourably with those for 1914. The law, as it stands, is admittedly unsatisfactory, and the Punjab Government has, in continuation of its previous proposals for the general amendment of the Act, submitted specific recommendations

with the object of enabling courts to dismiss summarily an insolvency petition presented by an agriculturist debtor, when it is apparent that he could, if he chose, satisfy his creditors' claims.

Guardian and Wards Act.

117. The number of applications for the appointment of a guardian under Act VIII of 1890 rose from 2,018 in 1914 to 2,140 in 1915, but remained considerably below the average of previous years. The amendment and simplification of the rules framed under the Act by the Chief Court appreciably lightened during the year the work of the courts in administering minors' estates.

23.—Registration.

General business.

118. There were 82,076 compulsory registrations of transactions during the year, a decrease of 1 per cent. from the figure for 1914, sales and mortgages having dropped 1 and 6 per cent., respectively. In three districts in which it was most pronounced the decrease was attributed to the direct or indirect influences of the war. In another district it was ascribed to the prevalence of plague during the early part of the year, and in another to a bumper harvest which satisfied the immediate needs of the people. In Ferozepore, Shahpur and Gujránwála Districts compulsory registrations were more frequent than in 1914. The statistics for Ferozepore were abnormally swollen by the registration of some thousands of leases by the Mamdot estate. In Shahpur drought and general scarcity were responsible for an increase of registrations of small value. In Gujránwála the increase was accounted for by the extension of municipal limits at head-quarters, and a growing tendency of the money-lending classes to invest in and build on suburban property in order to meet the new demand of the well-to-do town dwellers for residences removed from insanitary environments. The value of the property transferred declined by over 11 per cent. to a level lower than that of 1913.

119. A remarkable rise in value, of about 63 per cent., in transactions optionally registered affecting immoveable property, of which the number decreased by nearly 4 per cent., is explained by the registration of a few awards of high value in Rohtak, Miánwáli and Amritsar districts.

Land Alienation Act.

120. The very small number of *benami* transactions points to vigilance on the part of district officers in frustrating attempted evasions of the Land Alienation Act.

Income and expenditure.

121. The total income from registration was Rs. 3,46,564 and the total expenditure Rs. 1,43,272. The net profits on the operations of the Department shrunk by Rs. 20,000 below the figures for 1914. Expenditure, on the other hand, rose by 2 per cent., mainly on account of increased salaries to compensate for the high cost of living and the cost of additional establishment sanctioned towards the end of 1914.

23 A.—Legal Affairs of Government for 1915.

122. The number of references for opinion disposed of by the Legal Remembrancer was 952 as compared with 1,146 in 1914 and 910 in 1913.

123. The Secretary of State was plaintiff in 13 original suits during the year. Of these 6 were decided in favour of Government, none against and 7 remained pending at the close of the year. Of the 6 cases decided in favour of Government one was for possession of land and five were for the recovery of money. The total amount involved was Rs. 23,985-13-7.

124. The Secretary of State was defendant in 128 original actions including land acquisition cases. Of the 30 land acquisition cases, 27 were decided and 1 was withdrawn whilst 2 remained pending at the close of the year. The Collectors' awards were upheld in 14; while in 13 cases they were enhanced. The total enhancement amounted to Rs. 1,94,427-2-3. The amounts actually claimed by the owners above the Collectors' awards were over 15 lakhs.

125. Of the other 98 civil suits, 42 were decided in favour of and 14 against Government, whilst 42 remained pending at the close of the year.

The total amount involved was on account of—

		Rs.	A.	P.
(*a*) Land acquisition cases	...	15,08,943	2	4
(*b*) Other cases ...	...	4,53,674	8	11
Total	...	19,62,617	11	3

In class (*b*) the total amount claimed in decided cases was Rs. 2,60,644-12-3, out of which Rs. 1,299-6-10 only including costs was decreed against Government, whilst Rs. 626-2-3 was awarded to Government on account of costs in cases in which the plaintiffs' claims remained unsuccessful. The Secretary of State was appellant in 21 appeals, of which 15 remained pending at the close of the year, 3 were decided in favour of and 3 against Government. The Secretary of State was respondent in 34 appeals of which 16 were decided in the year, 12 being in favour of and 4 against Government, while 18 remained pending at the close of the year. No original revenue suits or appeals were brought by or against Government.

126. The criminal business stood thus—

There was 1 original trial in the Chief Court which was decided in favour of the Crown. In the subordinate courts, out of the 18 cases 6 were decided in favour of and 4 against the Crown, while 8 remained pending at the close of the year. Out of the 1,838 appeals in the Chief Court 1,171 were decided in favour of and 405 against the Crown, while 262 remained pending at the close of the year. In the subordinate courts there was only 1 appeal which was decided in favour of the Crown. Out of the 292 revision applications 196 were decided in favour of and 55 against the Crown, while 41 remained pending. There were 73 miscellaneous cases before the Chief Court, of which 72 were decided in favour of and 1 against the Crown.

24.—District and Local Boards.

127. The general constitution of the district boards remained unchanged during the year. Only 14 out of 133 vacancies were contested, a figure that does not indicate much desire for the elective system in 11 districts of the Western Punjab where it is not at present in force and where Government has its extension under consideration. From several districts it is reported that candidates were secured with difficulty and only on official pressure being brought to bear. In three cases the vacancies had to be filled by nomination owing to a want of candidates, and nearly 10 per cent. of the seats open to election are now filled by members so nominated. The fact must be faced that the rural population have been slow to appreciate and assimilate the election system, which is still foreign to their ideas and traditions. The result is that once a member has secured a seat by election, which in practice means either by popular acclamation or by acquiescence, he is in nine cases out of ten, if he so desires, re-elected without opposition on the expiry of his term.

128. The working of the boards shows on the whole that a steady development is in progress in some districts and affords re-assuring proof of a growing spirit of a public service and an intelligent appreciation of the duties of district representatives. Government recognise that a strong financial position is essential for intelligent and efficient administration, and the revision of the financial relations between Government and district boards, which is now in progress and has actually been introduced in the Rawalpindi Division, provides a most suitable opportunity for a thorough review by boards of their affairs with a view to an intelligent distribution of their resources among the many objects for which provision has to be made. The Government grants are being calculated so as to allow due provision for the maintenance of all existing services and a reasonable amount of development,

but the necessity of increasing the resources of the boards by local taxation from a rate which is ridiculously low in comparison with European countries like France and Italy, which also have a highly developed rural self-government, will have to be seriously faced.

129. Gross income fell by Rs. 7½ to Rs. 74½ lakhs, owing to a decline both under Government grants and other contributions; the figure is, however, more than double the average of the period 1902-03 to 1905-06. Expenditure rose by 11½ to over 86¼ lakhs.

130. More was both received and spent for education than in the previous year. The amount now received from fees in secondary schools amounts to 13 per cent. of the total expenditure, a figure which compares very favourably with that in other provinces. Nearly Rs. 5 lakhs were spent on the provision of new buildings with much assistance from private contributions. The proportion spent on education was generally ample.

131. Both receipts and expenditure for Medical purposes rose, though the attention paid to this department of their activities by the boards of certain districts was not sufficient. Most boards have now accepted the principle that fees should be charged to those able to afford to pay them, but the figures show that the practice lags very far behind the theory.

132. Steady advance was made in the spheres of improvement of agriculture and of the breeding of horses, cattle and sheep. The system of selling at half price to selected applicants bulls purchased by the boards from the Hissar Farm and the Civil Veterinary Department was adopted with excellent results in some districts and might be extended. Castration of inferior bulls and stallions with a view to controlling breeding received much attention during the year. Interest in sheep and goat breeding is gradually spreading, private individuals as well as boards making satisfactory purchases of Government bred rams of high quality. Appreciation of the work of the Civil Veterinary Department is growing among the people. Much assistance was given by the boards to the cause of scientific agriculture by the endowment of scholarships at the Lyallpur College, by the establishment of demonstration farms, and by visits of selected members whose travelling expenses are borne by the boards to the Government Agricultural Farms.

133. Taxes for the promotion of sanitary improvement are now in force in several villages in various districts. A Bill has been drafted and circulated for opinion which is intended to provide a simple machinery of self-government suitable to small towns and the larger villages, but for smaller villages Government has decided that the imposition of taxation and the passing of simple regulations under the District Boards Act will meet existing requirements. At present only a few districts have shown any inclination to adopt such regulations, and the Sanitary Board has intimated to them that it is prepared to assist in financing suitable schemes of sanitation, provided that a portion of the cost is forthcoming from local sources.

25.—Municipal Administration.

134. The number of municipalities declined to 100 during the year owing to the reduction of three towns to the status of notified areas. The boundaries of several municipalities were revised so as to include new urban areas which had grown up in their vicinity or to exclude purely agricultural lands to which it was desirable that the Land Alienation Act should apply. In the case of 29 out of the 100 municipalities where the elective system has not yet been introduced Government have invited the opinions of local officers and of the committees as to whether the system should be extended, but the replies which have so far been received do not indicate any very general desire for a change, though some municipalities would appear to be ripe for and desirous of it. There was a considerable falling off—from 46 to 30·5—in the percentage of vacancies contested at elections, which is the more difficult to explain as the fact that the newly elected members were in most cases qualified to vote for the Legislative Council elections might

have been expected to stimulate contests ; the percentage was not higher in any division than 48·5, although in many cases where elections took place the contests were exceedingly keen and in four municipalities over 90 per cent. of the voters came to the poll. Undesirable practices, such as false impersonation, use of forged votes and open sale of voters' certificates, which cast discredit on the whole system of elections and discourage some of the best men from coming forward as candidates, were unfortunately by no means uncommon, and with a view to eliminating or reducing them Government is engaged in the preparation of a revised set of rules of general application for the registration of voters and the conduct of elections. All the municipalities save 7 are empowered to elect their own presidents subject to the approval, which is readily given in the case of persons who command the confidence of the people and of the municipal members, of Government or of the Commissioner, yet it is significant that in practice the great majority of the committees still either elect a president from among the *ex-officio* members or apply to have a president appointed.

135. The working of the committees was on the whole satisfactory in the matters both of the number of meetings held and of the attendance of members. There were, however, not wanting illustrations of defects which retard the development and efficiency of urban self-government in the Province, *viz.*, disinclination to interfere with private interests for the public good, actual subordination of the general welfare to individual profit, jealousy shown by committees of the exercise of executive power by their own officers, and a concern on the part of officials rather to keep on good terms with individual members than to discharge their duty to the tax-payer.

136. The total income of the municipalities (over Rs. 74¼ lakhs) was Rs. 8¾ lakhs less than in the previous year, the amount of loans and grants from Government falling off by about Rs. 15 lakhs, and the fall in income was accompanied by a corresponding decrease, from nearly Rs. 83¾ to under Rs. 75 lakhs, in expenditure.

137. In the matter of education most committees are fairly discharging their responsibilities. In the improvement of sanitation and generally of the amenities of life in municipal towns there has on the whole been steady progress ; the draft Bill which aims at providing small towns and large villages with a form of administration suitable to their size, resources and capabilities has already been referred to in paragraph 132. The percentage of income devoted to medical relief is at present only about half the percentage formerly prescribed by rule as the minimum provision to be made by local bodies, and Government has enjoined the necessity for efforts to increase the income from fees so that more adequate provision may be made. Public Works were the least satisfactory department of municipal activity, adequate control over and inspection of the working of employés being in many cases sadly wanting.

Taxation.

138. The total receipts from direct taxation amounted to only about Rs. 4½ lakhs, of which about three-quarters were raised in the hill municipalities, whereas the net income from octroi was nearly Rs. 38¾ lakhs, a figure over Rs. 3 lakhs greater than in the previous year and higher than in the two years before the outbreak of the war. The octroi system is one that imposes an undue burden on the very poor while refunds and collection charges bulk over-largely, and the time has arrived to press on municipalities the need for more enlightened views. The substitution of a terminal tax for octroi has now been finally sanctioned for two municipalities and a terminal tax on certain exports has also been sanctioned for a third and since the close of the year for the notified areas of the Lyallpur district ; no further proposals to replace octroi by this form of taxation have however been received by Government, though they are said to be under consideration in a few cases. A more extended use of

the powers to impose a tax to pay for the cost of water-supply has been commended to the notice of committees.

26.—Military (Volunteers).

139. The strength of the Volunteer Corps on the 30th September 1915 is reported to have been as follows:—

Corps.	Company.	Stations.	Officers.	Non-Commissioned Officers.	Privates and Troopers.	Total enrolled strength.	Total number of efficients.	Sergeant-Instructors.	Remarks.
Punjab Light Horse.	...	Field Officers and Staff ...	9	...	...	9	...	5	
	A	Lahore	6	26	180	212	197	...	
	B	Ambála	1	8	43	52	47	...	
	C	Ráwalpindi	1	12	67	80	67	...	
	D R½	Peshawar	...	5	16	21	20	...	
	D L½	Amritsar	...	3	18	21	20	...	
	Detachment	Delhi	5	9	46	60	50	...	
	E	Lyallpur ... ... Multán ... ... Sargodha ... ... Montgomery	...	6	36	42	42	...	
	...	Reservists	1	...	60	61	61	..	
	...	Add for Supernumerary Officers	11	...		11	..	...	
		Total ...	34	69	466	569	504	5	
1st Punjab Volunteer Rifles.	...	Field Officers and Staff ...	12	..	...	12	...	8	
	A, B, C and Cadet ½ Company.	Lahore	9	30	314	353	325	...	
	D	Ráwalpindi	2	5	98	105	101	...	
	E	Amritsar	3	9	67	79	70	...	
	F	Delhi	3	9	88	100	98	...	
	G	Murree	3	10	94	107	107	...	
	H	Do.	1	12	59	72	72	...	
	I	Peshawar	4	18	104	126	118		
	K	Ferozepore	4	7	114	125	116	...	
	L	Srinagar	4	9	47	60	60	...	
	M	Siálkot	2	4	49	55	48	...	
	N	Delhi	1	1	24	26	26	...	
	...	Reservists	1	...	131	132	131	...	
	...	Add for Supernumerary Officers	14	...	...	14	...		
		Total ...	63	114	1,189	1,366	1,272	8	
Simla Volunteer Rifles.	...	Field Officers and Staff ...	9	...	...	9	..	4	
	A, B, C, D, E and H.	Simla	15	66	507	588	475	...	
	F and G	Sanáwar	5	27	155	187	167	...	
	...	Reservists	2	..	66	68	35	...	
	...	Add for Supernumerary Officers	17	...	...	17	...	...	
		Total ...	48	93	728	869	677	4	
North-Western Railway Volunteer Rifles.		Field Officers and Staff ...	14	...	..	14	...	5	
	A, B, C and D	Lahore	4	44	469	517	529	...	
	E	Ambála	1	8	145	154	154	...	
	F	Saháranpur	3	8	132	143	143		
	G	Ráwalpindi	2	16	151	169	170	...	
	...	Reservists	...	...	24	24	24	...	
	...	Add for Supernumerary Officers	...	...	...	...	...	...	
		Total ...	24	76	921	1,021	1,020	5	

140. The Punjab Light Horse, the Punjab Volunteer Rifles and the North-Western Railway Volunteer Rifles were inspected in February 1916 and the Simla Volunteer Rifles in September 1915. The reports in all cases were quite satisfactory.

141. During the year under review the Volunteer Corps of the Province were able to afford the Military Authorities a considerable amount of assistance in the way of maintaining reserves and completing establishments and between them contributed no less than 107 officers towards the Indian Army Reserve of Officers. Five of their members also received Commissions in the regular Army and a proportionally large number enlisted or rejoined the ranks. One officer and 28 non-commissioned officers and men joined Armoured train detachments, thirty-three joined Machine Gun Sections and 69 are now to be found in the Supply and Transport Corps either on active service or on Military duty in India.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the Operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1916.

(2) Annual Report of the Punjab Veterinary College, Civil Veterinary Department, Punjab, and the Government Cattle Farm, Hissar, for the year 1915-16.

(3) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1915.

(4) Report on the working of Co-operative Societies for the year ending 31st July 1916.

Weather and Crops.—(1) Report on the Weather of the Punjab for the year 1915-16.

(2) Punjab Seasons and Crop Report for 1915-16.

Horticulture.—Report on the Lawrence Gardens, Lahore, for the year 1915-16.

Forests.—(1) Progress Report on Forest Administration in the Punjab for 1915-16.

(2) Progress Report on Arboriculture in the Punjab for the triennial period 1911-12 to 1913-14.

(3) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1915-16.

(4) Land Revenue Report, as above.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1915.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the triennium ending 1915-16.

(2) Report on the External Land Trade of the Punjab for the year 1915-16.

(3) Report on the Joint Stock Companies in the Punjab for the year 1915-16.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1915-16.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1915-16.

(2) Land Revenue Report, as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—Statistical Abstract for British India, Volume I, Commercial Statistics.

Forest.—Statistical Abstracts for British India, Volume II—Financial Statistics.

Crops.—(1) Agricultural Statistics of India, Volume I, Tables II and III.

(2) Estimate of Area and Yield of certain Principal Crops in India.

(3) Prices and Wages in India.

(4) Variations in Indian Price Levels.

Mines and Quarries.—(1) Statistical Abstracts for British India, Volume I, Commercial Statistics.

(2) Records of the Geological Survey of India, Volume XLVII, Part 3.

(3) Report of the Chief Inspector of Mines in India.

Manufactures.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

Trade.—(1) Inland Trade (Rail and River borne) of India.

(2) Statistical Abstracts for British India, Volume I, Commercial Statistics.

Railways.—Administration Report on Railways in India for the calendar year 1915-16.

Irrigation.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

27.—Agriculture.

SCIENTIFIC.

General.

142. A third Assistant Director of Agriculture was appointed during the year. Sanction was received from the Secretary of State for the appointment, for five years in the first place, of an Entomologist for the Punjab, but owing to financial pressure steps were not taken to fill the appointment immediately.

Lyallpur College.

143. For the Lyallpur college the year was one of marked success. The college income increased and its expenditure diminished. There was a stronger demand for admission both to the English and vernacular classes and a keener interest in the college was evinced by the public. Forty students joined the English course in July 1915. Nineteen students appeared at and passed the leaving certificate examination. Of 22 candidates at the examination of the first year class 30 passed.

144. The vernacular class is becoming specially popular with zamindars. Out of 54 applicants 31 were admitted and 24 completed the course. All except 7 were sons of agriculturists. Many district boards presented scholarships for both the ordinary and vernacular classes.

145. A growing demand among private land-owners for diplomatees of the college as managers of their estates was a gratifying proof of the useful work done by the institution. Three such applications, all from European landlords, received during the year, were complied with. It was decided that two appointments of zilladar in the Irrigation Branch of the Public Works Department should be allotted annually to graduates of the college. A proposal to affiliate the college to the Punjab University is under consideration.

Experiments and research.

146. The most interesting of the various investigations pursued by the Agricultural Chemist was the experiment at Narwala in reclaiming saline lands. The end of the year saw its success assured. It was shown that for sum of about Rs. 18 per acre with an additional charge for water it should be possible to reclaim ordinary land so infected, thus turning land worth Rs. 50 per acre into first class land worth as much as Rs. 300. Practical experiments at Lyallpur based on the work of the Economic Botanist produced important results. Among these is the proof of the unsuitability of sandy soils for the growth of American cottons. The tests for discovering the best type of cotton were inconclusive, but favoured the choice of the American variety known as 4 F., in the popularisation of which the Agricultural Department continued to do successful work.

Implements and demonstration work.

147. In spite of the difficulty of transport and the high price due to the war, the sale of implements of European and American manufacture increased considerably. The total number of improved implements sold was 1,325, of which nearly 1,200 were ploughs. Much experimental work was done at Lyallpur with a view to the cheap production of the simpler instruments, such as harrows and hoes, which, while not so efficient as the foreign articles, would still be a distinct improvement on those commonly used. Being constructed chiefly of wood, they can be sold at rates acceptable to the zamindar, who is apt to object to the expense of the metal ploughs and other instruments hitherto offered to him.

148. Several demonstrations of improved implements were given at horse and cattle fairs and similar gatherings, notably one at the Sikh Educational conference at Tarn Taran in April 1915. Here 25,000 leaflets describing various implements were distributed in response to a great demand.

STORAGE AND DISTRIBUTION OF SEED.

Cotton.

149. The progress made in the introduction of American cotton was striking. The type known as 4 F. is remarkable for its great yield

and long staple. Over 7,000 maunds of this cotton were sold by auction in the Chenab and Jhelum colonies at a premium over the price for country cotton varying from Rs. 2-8-0 to Rs. 4. Probably nearly 3 lakhs of rupees were added in a single season to the incomes of cultivators in the Lower Chenab colony alone by its use. With these facts in view it is not surprising that the demand for seed was unprecedented. All the seed available was disposed of at a price 12 annas a maund more than that of ordinary cotton, and the estimated acreage under American 4 F. rose in the year from 7,700 to 50,000 acres, a most gratifying result of official effort on behalf of the Punjab agriculturist.

Wheat.

150. The area sown for the wheat crop of 1916, with seed distributed by the department, was 30,170 acres, of which 27,500 were sown with the variety known as Punjab 11. For the next crop 39,000 maunds of Punjab 11 seed were stored in the Lower Bari Doab, Chenab and Jhelum colonies. Of the variety classified as Pusa 12, which was the only other type of wheat distributed, 8,000 maunds were kept against the next harvest in the Central Punjab districts. Both these varieties yield about a maund an acre more than the country wheat they replace.

151. The co-operative credit societies gave help in the distribution and stocking of seed, and acted as agents for the sale of improved implements.

Sericulture.

152. Five hundred and seventy-five ounces of French silkworm seed were reared by the department, and distributed in Siálkot, Ambála, Hoshiárpur and Gurdáspur districts, the last taking 400 ounces. Villagers reared 565 ounces. The results were not satisfactory owing to weakness in the seed and a season unfavourable for the growth of succulent mulberry leaves. The produce, 73 maunds of dry cocoons, was sold for Rs. 5,087. The Salvation Army opened a school of sericulture in Simla with the aid of a Government grant.

Apiculture.

153. There were signs that scientific apiculture might, with propitious seasons, become an established industry in parts of the hill districts. The appointment of the Government Apiculturist was extended for two years. Lectures on bee-keeping were given at Sanáwar near Simla. Several of the Hill Chiefs joined the Simla Bee-keepers' Association, of which there were 36 members in 1915.

Date palms.

154. Date culture continued to show successful results and the fruit grown by the department fetched a price comparing most favourably with that paid for the ordinary dates of the country.

Loans to Agriculturists.

155. Advances to an amount of Rs. 4,53,107 were granted under the Land Improvement Loans Act (XIX of 1883) and the Agriculturists Loans Act (XII of 1884) as compared with Rs. 5¾ lakhs in the previous year. The good credit of the people during the year resulted in a small demand for Government aid, loans being easy to secure elsewhere.

156. The sum advanced for land improvement thus fell to Rs. 1,88,880, a reduction of 40 per cent. below last year's figure. More than a third of this sum was again taken by Ferozepore district. The balances at the beginning of the year were Rs. 15,65,472 on account of principal and Rs. 4,213 on account of interest. Interest to the extent of Rs. 93,518 fell due during the year. Collections on account of principal amounted to Rs. 2,26,582 and on account of interest to Rs. 88,824. Balances of principal and interest overdue at the end of the year were, however, Rs. 19,222 and Rs. 8,335 respectively. The financial gain to the Provincial Government was Rs. 33,869, or about the same as last year.

157. The amount advanced under the Agriculturists' Loans Act was Rs. 2,64,227, almost the same as in the previous year. The money was required almost wholly for the purchase of bullocks, although in Gurgaon, Montgomery and Muzaffargarh districts seed also had to be provided with

PRODUCTION AND DISTRIBUTION.

borrowed money. Rs. 3,76,985 on account of principal were collected and Rs. 24,954 on account of interest. The balances of principal at the beginning and end of the year were Rs. 4,97,626 and Rs. 3,83,689. The financial result of operations under this Act was a gain of Rs. 7,637.

Co-operative Societies.

General.

158. The year was a period of trial for the co-operative movement; the province had not recovered from the financial crisis of 1913-14 when the war broke out, and a bad autumn crop, followed by a poor spring one, prevented any improvement in the economic situation. A severe scarcity of fodder in many districts subjected the agriculturists to a trying ordeal. In consequence of this series of adverse factors, there was a considerable demand for loans by members while repayments could with difficulty be made. The same causes led depositors to withdraw their money. Confidence in the movement, however, showed no signs of wavering. In order to assist Central Banks to meet the claims of depositors, the Local Government placed one lakh of rupees at the disposal of the Registrar, but only Rs. 45,000 of this was utilised. The big Central Banks at Jullundur and Lahore were able to come to the assistance of the more sorely pressed institutions, and with the advent of the monsoon the withdrawal of deposits diminished.

159. The outstanding feature of the year is that though deposits decreased by Rs. 7·5 *lakhs* share capital of agricultural societies alone increased by Rs. 5 *lakhs* and their reserve fund by Rs. 12·3 *lakhs*. The share capital of Central Banks increased by over Rs. 2 *lakhs*. The result was an increase in the proportion of capital owned by the societies and a decrease in that drawn from depositors. The working capital of primary societies increased by Rs. 12 *lakhs* and of Central Banks by Rs. 2·3 *lakhs*. These figures in a year of economic depression bear eloquent testimony to the financial strength of the movement.

160. No effort was made to increase the number of societies except in Muzaffargarh, where the conditions seemed to make it advisable to attempt the introduction of co-operative credit. Primary societies increased by 50. Membership declined by 11,774 to 144,635 owing to gradual insistence on the condition that each member should hold one share. In the early stages of the movement individuals were allowed to join on payment of a fee, and many of these who had ceased to have transactions with the society were eliminated.

Central Banks.

161. The Central Banks continued to do well. Four new banks were opened during the year of which one, however, omitted to secure registration until after its close, and one Union was wound up. Another Central Bank was completely reconstituted on a share basis. Inpursuance of a recommendation by the Committee on Co-operation, 495 more primary societies acquired shares in the Central Banks and with them some control in the management.

Central Banks increased their share capital by Rs. 2·4 *lakhs* to Rs. 10·58 *lakhs*, and their reserve fund by Rs. 50,000 to Rs. 1·38 lakhs. Their total working capital is now Rs. 55·3 *lakhs* of rupees. Their profits for the year were over Rs. one lakh.

Agricultural Societies.

162. These societies have come well out of a series of adverse circumstances. They lent Rs. 33·2 *lakhs* and recovered Rs. 25·3 *lakhs* principal, Rs. 12·3 *lakhs* interest (net) and Rs. 5 *lakhs* share capital. At the close of the year loans outstanding amounted to Rs. 1,20,37,880. At a very moderate estimate they saved their members nearly Rs. 14·5 *lakhs* in interest and made over Rs. 8 *lakhs* of profit for them, a clear gain of over Rs. 22 *lakhs* in the year. They hold nearly Rs. 70 *lakhs* of their own money beside Rs. 10·5 *lakhs* of members' deposits. They owe Rs. 46 *lakhs* to Central Banks and Rs. 14 *lakhs* to outside depositors. Regarded as a whole, the financial position of these societies is very saisfactory indeed. The system of share payments by annual instalments coupled with the

prohibition against any distribution of profits for ten years is creating a large fund of members' own money which is rapidly approaching the total required for all ordinary needs.

163. Weavers' Societies have had to face a large increase in the price of raw material, especially of dyes, while, as was to be expected in a year of economic strain, the demand for their goods declined. The central yarn store has worked satisfactorily. The black-smiths' societies have met with fair success. Non-agricultural Societies.

Other non-agricultural societies are making steady progress but the co-operative spirit is not always as strong as is to be desired. The Simla societies contain many good members whose enthusiasm should ensure success. An effort to start a trader's co-operative bank in Lahore failed owing to the apathy of those for whose benefit it was intended.

The co-operative shops for the sale of grain have suffered loss through the dishonesty and malpractices of their staff. They failed to adhere strictly to the essential principles and were led astray by a desire to make profits.

The system of referring disputes to arbitration was utilised freely during the year; generally, the defaulters paid up without the necessity of filing the award in court. In no case has any one, member or non-member, suffered any actual loss.

VETERINARY AND LIVE-STOCK.

164. The subordinate establishment of the Civil Veterinary Department was 25 per cent. below its sanctioned strength in 1915. Nevertheless the record of work showed no falling-off. The number of castrations was nearly double that of the previous year. The progress made in this respect is an encouraging proof of the extent to which popular prejudice is being overcome. Further evidence that the value of the department's work is being recognised by the people is found in the number of inoculations and vaccinations against rinderpest and other diseases performed in a year singularly free from those diseases and generally very healthy. In spite of pressure of work at head-quarters the department was able to assist the Army Remount Department in various ways. General.

165. The fine new college buildings at Lahore were opened in December 1915 by the Viceroy. The increased facilities for training afforded by the new buildings led immediately to great improvement in the training of the students, while the greatly enlarged accommodation provided in the hospital was reflected in the number of in-patients treated, which rose from 756 in 1914-15 to 1,355 in the year under report. The distance of the new hospital from the city led, however, to a decrease in out-patients, and a scheme was proposed for a municipal dispensary to serve the more distant parts of the town.

166. Seventy new students joined the college, of whom more than half, an unusually high proportion, belonged to the Punjab. Of these 50 had passed the Anglo-Vernacular Middle School examination and 3 the Matriculation examination of the Punjab University. Of 55 students who appeared for the final examination, 49 obtained the diploma, although the standard was considerably higher than it was last year. A post-graduate class was started in October with a class of 4 veterinary graduates, one each from the Provincial Civil Veterinary Department, Baluchistán, Kapúrthala and Kashmír.

167. No new veterinary dispensaries were opened by local bodies, but the rebuilding of three old dispensaries was completed and various additions were made to existing dispensaries. Several public-spirited Indian gentlemen provided buildings at their own expense. Over 300,000 animals were treated as in-or out-patients, a total more than double that of any other province in India. Hospitals.

PRODUCTION AND DISTRIBUTION.
Miscellaneous.

168. The system of instructing Veterinary Inspectors and Veterinary Assistants was continued on the same lines as during the past two years. Five meetings were held in the Central Punjab circle, and two each in the North and South Punjab. The Chief Superintendent also held a meeting at Dera Gházi Khan. There is no doubt that these meetings did much good and improved considerably the work done by the assistants. Lectures and demonstrations in villages by the department were carried on as before, with marked benefit to the people. During the year nearly 13,000 villages were visited and over 128,000 animals were treated by the travelling members of the staff.

Cattle-breeding.

169. A feature of the year in the history of cattle-breeding, was the establishment of three cattle-breeding farms in the Lower Bari Doab Colony. The management of breeding herds on scientific lines was an entirely new departure for most of the grantees, and in the circumstances the progress made in it during the year was satisfactory. The breeding of sheep from hybrid merino stock continued to gain popularity.

Government Cattle Farm, Hissar.

170. The results of the working of the Cattle Farm at Hissar depend largely on the fodder supply, and the failure of the monsoon had a disastrous effect on its finances. Fodder had to be imported in large quantities and the stock suffered considerably, the number of casualties being greater than in the previous year in spite of the fact that the farm was unusually free from contagious disease. Expenditure rose from Rs. 1,54,070 to Rs. 1,85,416, while receipts declined by over Rs. 8,000 to Rs. 1,01,024. The number of animals of all sorts sold was only 613 as compared with 845 in 1914-15, though 181 bulls were issued to district boards—a number which again beat all previous records.

Camel Specialist.

171. The Camel Specialist continued his important observations and experiments on the treatment of the various diseases to which camels are prone, inspecting in the course of his work the military camel corps, camel fairs, Government camel runs, and camel-breeding villages, and disseminating useful knowledge among the people. The value of the work done is illustrated by the success gained in treating "surra," a disease which alone caused the death of 2,500, or about 12 per cent., of the camels in 13 military camel corps. Out of 158 camels afflicted by this disease in one unit, 129 were saved by the special treatment recommended, representing a saving to Government, at an average value of Rs. 140 per camel, of Rs. 18,060. The cost of the department during the year was Rs. 26,661.

27-A.—Fisheries.

172. The Fishery Regulations have become law in the Mandi and Suket States, in the Kángra district, including the Kulu sub-division, and in that portion of the Hoshiárpur district which lies on the Beas river above Mirthal ferry. Regulations have been drafted for Gurdáspur and fishery conditions in Hoshiárpur, Jullundur and Amritsar districts were investigated.

173. The Chhenáwan *murral* pond suffered considerably in the late monsoon and two of the dams were breached, allowing the fish access to the river. The Mádhopur fish farm was kept under observation. Experiments in breeding carp did not meet with success. Trout fishing in Kulu was thrown open to the public. Trout were found to be breeding naturally, and anglers reported sport in the Beas.

174. Interesting enquiries were made with a view to introducing the manufacture of buttons out of mussel shells. It appeared doubtful whether the quality of the indigenous mussel was such as to promise satisfactory results.

28.—Weather and Crops.

Character of the season.

175. The rainfall during the year ending 31st May 1916 was far below normal throughout the province. The weather was unusually disturbed in the second and third weeks of February 1915 during which the rainfall was above normal in most districts. Widespread and fairly heavy precipitation occurred in the second week of March; but during the rest of the month and throughout April, May and June the rainfall was generally in defect. Autumn sowings were, in consequence, seriously restricted on unirrigated areas. The monsoon never penetrated in full strength into the Punjab with the result that the rainfall in July and August was scanty, occurring merely as sporadic showers at lengthy intervals. This impeded sowings and caused damage to the earlier sown unirrigated crops. During the first 11 days of September the province experienced a spell of abnormally dry weather, but in the latter half of the month the monsoon extended over the greater part of the Punjab. The result was an invigoration of standing crops, except in the Shahpur district and the whole of the Multan division which remained unaffected. The total monsoon rainfall in the province during the season fell short of the normal by as much as 41 per cent.

176. Numerous light falls of rain occurred in most districts during the first week of October, but the whole of November was practically rainless. Light showers in December benefited the sugarcane and spring crops. The rainfall in September left sufficient moisture for spring sowings except in parts of the south-east and west of the province. The first three weeks of January were dry. Light rain fell throughout the Punjab on the 31st of January and in the first two weeks of February, but it was insufficient for unirrigated crops, which had long been suffering from drought. Light or moderate showers in the south-east and the sub-montane tracts in the third week of February did much good. After this the weather remained generally dry till the third week of March when light but fairly general rain again fell. This benefited the standing crops, specially in parts of the Ráwalpindi division, where the fall was good. The total winter rainfall, however, was insufficient for the maturing of the unirrigated crop which suffered everywhere, specially in the south-eastern and south-western districts. The weather in April and May remained generally rainless, and this allowed reaping and threshing of spring crops to be completed without interruption. Thanks to the rainfall in September and October, spring harvest sowings were not so seriously affected by the drought as the sowings of autumn crops. The total sown area was 18 and 8 per cent. less than the area sown in the previous year and the assumed normal sown area, respectively, while owing to insufficiency of the monsoon and the winter rainfall, the total matured area was 31 per cent. and 19 per cent. less than the last year's matured area and the assumed normal matured area, respectively.

The autumn harvest.

177. The area sown for the autumn harvest was 27 per cent. below the area of last year and 23 per cent. below the normal. In addition to seasonal causes, the heavy stocks of cotton left over from the previous crop and the low prices due to contraction in exports led to a decrease of 51 per cent. in the sowings of this crop. Maize, rice and sugarcane did better than other crops. The total matured area fell short of last year's matured area by 35 per cent. The percentages of failures were particularly high in the Ambála and Ráwalpindi divisions where the unirrigated area is important.

The spring harvest.

178. The rainfall in the second half of September and showers in October were sufficient for the sowing of the rabi crop except in parts of the south-east and west where the rain was slight and insufficient. High prices of food-grains stimulated sowings, and the total sown area was only 13 per cent. below the area of last year and 2 per cent. in advance of the normal. The decrease was confined to the unirrigated area only: in the irrigated area there was an increase of 8 per cent. as compared with last

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year. The winter rainfall, however, was quite insufficient for the maturing of the unirrigated crop. The matured area was 29 per cent. less than last year and 24 per cent. of the sowings failed against 7 per cent. last year.

Chief staples.

179. The area under wheat declined from 9,915,507 acres in 1915 to 8,991,542 acres in 1916, a decrease of 9 per cent., but 5 per cent. better than the normal. The failure of the winter rains told very severely on the crop. The total yield was 2,167,561 tons or, all round, 17 per cent. short of the normal, the shortage of the irrigated crop amounting to 1 per cent. and of the unirrigated to 43 per cent.

The outturn of the other principal crops as compared with the estimated normal outturn is given below :—

Name of crop.	*Outturn in percentage of estimated normal.*
Gram	57
Barley	72
Cotton	53
Jowar	55
Rice	121
Bajra	45
Maize	108
Sugarcane	101
Oilseeds	80

Harvest prices.

180. There were two main factors acting upon prices in the past year the character of the harvest and the war. The former caused a rise in all prices except those of wheat, maize and rape-seed. The most significant increases occurred in the case of cotton and sugarcane. The price of cotton rose from Rs. 4-4-0 in 1914-15 to Rs. 6-9-0 in the past year, and thus all but regained the level of 1913-14. A renewed demand for export combined with the failure of the crop (which yielded only half the normal outturn) to produce this result. The yield of raw sugar was approximately average, but the country depends to a great extent on foreign supplies of sugar and their restriction forced up the price of this product sympathetically from Rs. 4-5-0 to Rs. 5-13-0. The maize harvest was good and its price fell. In the case of wheat and rapeseed a diminished foreign demand and difficulties about freights have caused a fall of 3 and 2 annas per maund, respectively, in the average harvest price.

Trade and stocks.

181. Trade in grain was slack and stocks were sufficient, except in Hissar. Recently the export trade has revived and prices are going up. In the case of "other food-grains" (which consist mainly of maize and barley) and of raw cotton, exports have been heavier than in the preceding year.

29.—Horticulture.

Agri-Horticultural Garden, Lahore.

182. The failure of the monsoon and winter rains, the erratic canal supply, and the disappointing amount of water provided by the tube well, all helped to make the year an unfavourable one for the Lahore Gardens. Progess was made in classification of eucalyptus suitable for growing in the plains. With a view to improving roadside arboriculture in the Province, an arboricultural class was started in the gardens, to which the district boards of Amritsar, Gujránwála, Jhang and Multán sent nominees. All the boys in the three gardening classes made good progress in their work.

30.—Forests.

Alteration in area.

183. The area controlled by the Forest Department was reduced by 441 square miles to 7,796 square miles. The decrease is mainly due to the release of nearly 440 square miles of irrigable land for colonisation

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Four hundred and seventy-one acres were transferred to the Irrigation Department and some other minor changes were made. The unclassed forests of the Nadaun, Kutlehr, Dáda Siba and Goler Jagirs, in the Kángra division, were declared protected forests under Chapter IV of the Forest Act. The area under the department at the end of the year consisted of the following classes :—

	Square miles.
Reserved forests	1,791
Protected forests	4,168
Unclassed State forests	1,472
Leased forests	365
Total ...	7,796

Forest Settlements.

184. The settlement of the Kángra jagir forest was completed and an area of 406 acres, acquired for the protection of the Dharmsála Civil Station, was declared to be reserved. Two small areas in the Montgomery district and the Government enclosure at Tera in the Lahore district were under settlement ; the former are to be reserved for the browsing of camel corps and the Tera area is to be irrigated with a view to growing firewood for the resin distillery. The settlement of the Chichawatni irrigated plantation in Montgomery district remained incompleted. The revision of the settlement of the Bashahr State forests was begun, much to the satisfaction of the right-holders.

185. The rights over trees on waste lands and Government rights over trees on tea estates in Kángra district were the subject of enquiry by Government.

Working Plans.

186. A revised plan for the Murree-Kahúta forests of the Ráwalpindi division was sanctioned. The plan provided for more intense treatment of the pine forests, promising a three-fold increase in production. The revision of the Kángra working plan made fair progress ; but was delayed by difficulties in the connected scheme necessitating the closure of selected areas. It was decided to review the lines on which the Pabar (Bashahr division) working plan was being prepared, and a combined plan for the Pabar and Nogli ranges was brought under consideration. Schemes for providing browsing areas for the 55th and 56th Silladar Camel Corps were sanctioned, but remained in abeyance pending the return of the corps from active service. Progress was made with similar schemes for six other corps.

187. Preliminary reports for the revision of the working plans for Kulu forests, the Shahdara and Chánga Mánga plantations and Pangi (Chamba State) forests were approved by Government. A plan for the Dharmsála municipal forests was prepared.

Protection.

188. The number of forest offences reported—10,512—was rather less than the average figure for the three preceding years. The total area of forest burnt was 18,511 acres as compared with 41,578 acres in 1914-15. The fire season was one of the worst on record in the Kulu division, but the Ráwalpindi and Kángra forests escaped a recurrence of the disastrous fires of the previous year. In Kángra increased taxes on nomad flocks reduced the number of these animals by 50,000, and it was decided to impose a tax on the animals of resident owners. A number of forests were opened to grazing to meet the distress arising from prolonged drought, and only 252 square miles remained entirely closed.

Natural and artificial reproduction.

189. Drought hindered considerably the reproduction of trees and growth of coppice shoots in several divisions. The crop of deodar seed was bad,

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that of chir (*Pinus longifolia*) fair, of blue pine, spruce and fir satisfactory. Financial stringency led to the postponement of the sowing of the Khanewal plantation and curtailed operations in the Chichawatni plantation. In the Kot Lakhpat plantation an additional area of 53 acres was stocked with shisham, and in the Phália tahsil of the Gujrát district an area of 7,500 acres was selected for another irrigated plantation. The results of broadcast sowing of eucalyptus in the vicinity of Simla appeared to prove that this tree could only be raised with success in nurseries.

Exploitation.

190. The total outturn of all classes of produce compared favourably in amount with the average of the three preceding years, as the following figures show :—

	Timber.	Firewood.	Minor produce.
	Cubic feet.	Cubic feet solid.	Rs.
1915-16	9,518,885	29,822,252	24,39,562
Average 1912—1915	6,390,845	20,421,458	23,23,552

More extensive fellings were made and some arrears cleared off in Bashahr, Kulu, Lahore and Ráwalpindi divisions, while the clearance of land for colonisation accounts for most of the increased outturn of firewood. The increase in minor forest produce is due to the collection of more resin and its valuation at Rs. 13 per maund instead of Rs. 8. More than thirteen thousand maunds of resin were collected in the Ráwalpindi chir forests, and, including that already in stock, 19,511 maunds were distilled, yielding 12,169 maunds of resin and 31,445 gallons of turpentine. The introduction of the uniform system of treatment in the chir forests in Ráwalpindi and the deodar forests in Kulu will increase their yield and secure more satisfactory reproduction than has been obtained hitherto.

Miscellaneous.

191. Difficulties in securing the necessary capital in Europe prevented progress in the wood pulp and olive growing industries The orchards maintained in the Kulu Division throve well, the oldest trees coming into bearing for the first time.

Reboisement.

192. Work in connection with the reboisement of the Siwálik Hills was continued, but the failure of the rains resulted in failure of a great part of the sowings. The extension of closures was postponed for financial reasons, as they involved the payment of considerable sums as compensation. Revised rules under the Punjab Act III of 1913, regulating the establishment of timber depôts and the sale of timber in the vicinity of rivers, were brought into force. The first volume of the Punjab Forest Manual was completed.

Financial results.

193. The financial results of the work of the department are given in section 43. The year's working shows a surplus of Rs. 10,55,559, and the cash surplus of Rs. 7,95,229 has only once been exceeded. The prices of all the chief timbers rose considerably, and the market for resin products was very favourable. The price of firewood, on the other hand, fell owing to the flooding of the market with wood cut in areas cleared for colonisation.

31.—Mines and Quarries.

Indian Mines Act.

194. The number of mines worked during 1915 was 29. These consisted of 4 Government salt mines, 14 coal mines (11 in Jhelum, 2 in Shahpur and 1 in Mianwali, of which the mining lease has been recently cancelled on the ground that operations were not in *bonâ fide* progress to the satisfaction of the Local Government), 10 slate mines (4 in Gurgaon,

5 in Kangra and 1 in Gurdaspur) and one limestone quarry at Hoshiárpur. No new prospecting licenses for coal were granted.

195. The total amount of minerals raised and its value as compared with 1914 is as follows :—

	Minerals in tons.		Value in rupees.	
	1915.	1914.	1915.	1914.
			Rs.	Rs.
Salt	154,770	135,517	3,94,986	2,86,701
Coal	59,579	53,774	3,24,533	2,80,419
Slate	7,910	9,169	1,09,926	1,16,445
Limestone	1,100	45	602	80

Excepting as regards slate, there is a slight increase in the outturns as compared with 1914.

196. The minerals which do not come under the Indian Mines Act are—Gold by washing, petroleum, alum shale, block kankar, limestone, gypsum, antimony ore, building and sandstone. The outturn and value of the minerals recovered during 1915 have been as follows :— Other minerals.

District.	Mineral recovered.	Value.
		Rs.
Ambala, Attock, Jhelum and Mianwali.	Gold, 149·59 ozs.	9,057
Attock	Mineral oil, approximately 250,000 gallons ...	30,000
Mianwali	Petroleum, 1,494 gallons	239
Do.	Alum shale, 7,014 tons	7,865
Ambala	Block kankar, 999 tons	1,953
Jhelum	Limestone, 26,889 tons	20,167
Do.	Gypsum, 773 tons	580
Do.	Antimony ore, 2·06 lbs.	80
Do.	Sandstone, 38,215 tons	45,765
Simla	Building stone, 4,744 tons	1,108

197. The total number of prospecting licenses for oil granted during the year was as follows :— Prospecting Licenses for oil.

District.	Name of Company.	Total number of licenses.	Area covered.
Attock	Attock Oil Company ...	4	33½ square miles.
Do.	Burma Oil Company... ...	4	16$\frac{15}{16}$ „ „
Jhelum	Ditto	1	3 „ „
Do.	Indo-Burma Petroleum, Company Limited, Rangoon.	2	11½ „ „

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32.—Manufactures.

198. The number of factories subject to inspection under the Act has declined from 201 to 187, and, of this number, there were at work 163 factories as compared with 197 actually at work during the previous year. The decrease is due to the closing down of some of the cotton ginning factories for two successive seasons as a result of the short cotton crop and the general slackness of the cotton trade during the war; but a contributory cause of this decrease in the number of registered factories is that many were exempted from the Act as a result of not employing more than 50 persons simultaneously on any one day. Of the 163 factories working, 85 factories were inspected once, 41 twice, 17 three times and 6 more than three times. On the whole, the water-supply is sufficient and satisfactory in practically all factories: the general sanitary conditions show a steady improvement and are now much above the Indian standard of cleanliness. The general lighting and ventilation arrangements are steadily improving, except that in spinning mills the ventilation is still not very satisfactory.

199. The average daily number of employees in all the factories in question was 29,720 compared with a total number of 31,243 last year: the figures for adult females and child workers being 3,098 and 1,104, compared with 3,749 and 1,132 in the previous year. There has been no dearth of labour in the case of cotton ginning factories; owing to the high prices of food stuffs, poverty-stricken coolies have been only too willing to accept the low wages offered them. In engineering workshops wages are slightly on the up-grade, while owing to the munition work there was a large demand for good lathe turners. A coolie generally gets from Re. 0-6-0 to Re. 0-10-0 per day. In ginning factories, the rate of wages is Re. 0-4-0 to Re. 0-6-0 in the case of men, and Re. 0-3-0 to Re. 0-5-0 in the case of women; children get from Re. 0-2-0 to Re. 0-4-0. The employees in factories are generally healthy. The numbers of women and children employed show a decrease owing to the poor cotton season, and of the 3,000 and 1,000 women and children respectively shown as working, the majority of them work in sorting and cleaning cotton in places not containing any machinery. Nearly six hundred children's certificates of age and fitness were granted.

200. There were in all 195 accidents (6 fatal) as compared with 227 last year. There is a decrease under fatal and serious accidents, and the average number of accidents of all sorts per 100 operatives ·65 is the lowest figure touched in the last ten years. As in the previous year, none of the prosecutions instituted failed. It is particularly satisfactory to find that sanitary reforms and improvements in the fencing of machinery have in the main been introduced with the co-operation of owners and without resort to the penal sections of the Act.

33.—Trade.

INTERNAL RAIL AND RIVER-BORNE TRADE.

Harvests.

201. This report deals with the triennium ending 1915-16. The trade figures under review relate to the spring and autumn harvests of 1913, 1914 and 1915. The spring crop of 1913 was average, that of 1914 was below normal, while in 1915 the harvest was good. The autumn crop of 1913 was above normal, except in the south-eastern dry area. The cotton crop of this year was a record one. The kharif of 1914 was above normal; that of 1915 was chequered. Harvests were good on the whole.

Prices.

202. During the first half of the triennium under report, prices were affected by the famine in the United Provinces and scarcity in the adjoining south-eastern districts of the Punjab, and during the second half, by conditions brought about by the war.

Volume of trade.

203. The following table gives the totals of trade exclusive of animals and treasure during the last two triennia :—

		Exports.		Imports.	
		Maunds.	Value.	Maunds.	Value.
			Rs.		Rs.
1910—13	Total	171,895,435	85,09,39,468	165,168,460	88,40,49,433
	Average	57,298,478	28,36,46,489	55,056,153	29,46,83,144
1913—16	Total	162,885,474	92,97,84,594	189,075,904	96,45,04,993
	Average	54,295,158	30,99,28,198	63,025,301	32,15,01,664

The development of trade has been hampered by the banking crisis of 1913-14 and by the war, but, nowithstanding, the total volume is larger than before. The balance of trade is slightly against the Province. The exports are mainly grain and raw materials, while the imports consist principally of merchandise. In the years 1912-13 and 1913-14 the value of exports exceeded that of imports, but the war has caused a set-back and there was a heavy drop in the volume and value of exports in 1914-15 with only a partial recovery in 1915-16. The import trade, on the other hand, has been fairly well maintained in extent, and its value has increased.

Exports.

204. The statistics of exports emphasize the fact that the Punjab is essentially, indeed almost entirely, an agricultural province. The only manufactured article exported in any appreciable quantity is Indian woollen piece-goods. All other manufactures are imported. Exports consist of grain and pulse, raw cotton, raw wool, Indian woollen goods, hides and skins, leather, rape and mustard seed, linseed, salt and saltpetre. The Punjab has on the balance been importing jowar and bajra, rice, cotton seed, sesamum, fodder, ghi and unrefined sugar. In the past triennium, grains and pulses have formed 54 per cent. of the total exports having regard to value.

205. Usually, the exports of wheat follow closely the character of the preceding harvest, but unnatural conditions prevailed in 1915-16 owing to the want of freight and the restrictions on export involved in the Government wheat scheme. The famine in the United Provinces in 1913-14 and then the heavy requirements of the Army have led to increased exports of gram and pulse which were facilitated by the bumper crop of 1915. The outbreak of the war diminished very seriously the market for raw cotton, much of which was taken previously by Austria and Germany. A growing demand from Japan, however, has helped to retrieve the situation. The oilseed trade is another branch that has suffered from the war, and in 1914-15 exports fell to less than a quarter of their previous volume. On the other hand, the exports of wool and woollen goods have increased under the stimulus of the demand for Military purposes, while the imports have diminished. Woollen goods are among the few important manufactures of the Punjab, and the total value of the Indian woollen goods exported has increased steadily from 2½ lakhs in 1908-09 to 23½ lakhs in 1915-16. The popularity of Khewra salt in other provinces appears to be increasing, and exports rose by 8 lakhs of maunds in the last triennium. The net export of leather has risen over 21 per cent. in the last triennium. The war has caused a significant increase in the export of saltpetre.

Imports.

206. The net imports of coal and coke for railway purposes increased by 73 lakhs of maunds in weight and Rs. 65 lakhs in value owing to the

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opening of new railway branches in the Punjab. Unfortunately there has been a fall of over 19 *lakhs* of maunds in the import of coal and coke for other purposes, while the price of the coal imported has greatly increased. The reason for this fall is to be found partly in the shortage of rolling stock and partly in the shock sustained by industries owing to the failures of banks. The import of cotton piece-goods of foreign manufacture increased steadily throughout the previous triennium, and the first year of the last triennium, indicating a steady rise in the standard of comfort among the people. The war dealt a blow to the trade in 1914-15, and though a recovery occurred in 1915-16, imports were still below the level of 1911-12. Indian factories have reaped the benefit. For long they supplied about 5½ *lakhs* of maunds to the Punjab annually, but in 1915-16 the figures advanced to 6¾ *lakhs* and the total amount of piece-goods, foreign and Indian, imported in 1915-16 formed a record. Scarcity at different times in the United Provinces, or in the south-east of this province, has resulted in variations in imports of jowar, bajra and fodder.

River-borne trade.

207. The volume of imports by the river Indus remained very steady throughout the last six years till 1915-16 when a drop of 11 per cent. occurred. The export trade is not so steady. It has fallen in weight by 12 per cent., but has increased in value in the last three years.

Treasure.

208. The imports of treasure increased rapidly during the triennium, though in the latter half silver has replaced gold to a marked extent. The increase in imports is due in part to the demand for coin when the war first started, but it also connotes growing prosperity.

Distribution of trade.

209. Karachi is still the best customer of the Punjab, but its share of the exports has fallen from 61 per cent. in 1912-13 to 42 per cent. in the last two years. The war is mainly responsible for the decrease, but the famine in the United Provinces in 1913-14 also effected a change, diverting large quantities of food-grains. Bombay and *Rajpútána* follow in importance among our customers. Imports come mainly from Karáchi, but the large imports of jowar, bajra and fodder in the last two years, owing to the scarcity prevailing in the south-eastern districts of the Punjab, have given the United Provinces a place but little behind it. Bombay and then Calcutta are the next most important sources of supply for the Punjab. The only noteworthy point in the distribution of trade among the internal blocks of the province is the increasing importance of the cis-Sutlej Territory both in imports and exports. It has been a large importer of fodder and the inferior food-grains in recent years, and, except in regard to wheat, it is pre-eminent in the export of all grains, oil-seeds and spices. Wheat comes mainly from the territory between the Sutlej and Jhelum. These two blocks between them take three-quarters of the imports and are responsible for 85 per cent. of the exports of the province.

Trans-Frontier Trade.

General.

210. An important change in the system of registration initiated during the triennial period from 1913-14 to 1915-16 resulted in the inclusion in the statistics of a considerable volume of trade with Central Asia which had not been previously recorded, and this fact is the main explanation of the expansion of the total volume of that trade from 11 *lakhs* in the previous triennium to 77 *lakhs* in the period now reported upon. On the whole, however, the statistics indicate a steady expansion, both of import and of export trade, and a definite turn of the balance in favour of the Punjab. The value of the imports for the last three years amounted to 43·8 *lakhs* against 17·7 *lakhs* and 13·4 *lakhs* in the two preceding triennia, the corresponding figures for exports being 49·7 *lakhs* as compared with 8·2 *lakhs* and 4·8 *lakhs*. This expansion was checked to some extent by the outbreak of war and the consequent dislocation of trade, but later exhibited distinct signs of revival. The net imports of treasure recorded in the last triennium amounted to 2·40 *lakhs* while in the previous period there was an export of over 2 *lakhs*.

211. In the case of Afghánistán the weight of exports from India decreased though their actual value rose, a result in which the great enhancement in the price obtained for rice (from Rs. 5 to Rs. 9-4-0 per maund), was the main factor. The trade in piece-goods of Indian manufacture shewed a sudden and remarkable increase of more than 3½ *lakhs* during the last year under report, for which the stoppage of European products owing to the war was no doubt greatly responsible. The trade in green tea which gave promise of some importance in previous years ceased suddenly in 1915-16, probably owing to its diversion to the railway route. In all the principal articles of import there was a falling off during the last triennium, partly owing to the poor fruit season in 1914-15, partly to the opening of the railway to Quetta, which diverted some of the trade, and partly to the restrictions placed on the export of certain commodities in Afghánistán. Afghanistan.

212. The present system of registering Central Asian trade dates from April 1913. The trade in *charas* expanded from 2,871 maunds in 1911-12 to 4,474 maunds in 1915-16 when there was a rush to anticipate the increase of duty which came into force in April 1916. The closing of the Russian bank at Káshgar led the traders to use silk to pay their debts in the Punjab and nearly 5½ *lakhs* worth of the raw article was brought in last year. The cessation of the Haj pilgrimage so far as Central Asiatics are concerned practically extinguished the trade in manufactured silks. The high prices obtainable in India for dye stuffs resulted in the re-importation of 30 maunds of paints and colours exported before the war. Central Asia.

213. In the case of exports there was a decline in the past year in all the important staples, except Indian piece-goods, petroleum, sugar and green tea. The export of European piece-goods steadily diminished throughout the triennium owing to the war, while Indian piece-goods more than maintained their level. In the case of silks also Indian manufacturers seized their opportunity while Germany was out of the market. The difficulty of remitting money owing to the closing of the Russian Bank at Káshgar is blamed for the fall in the export of skins. The trade in unmanufactured leather varied throughout the triennum, but remained fairly strong at its close, while exports of manufactured leather, though small, steadily increased, and the trade is said to have been profitable. Petroleum also offers profitable trade, which increased rapidly during the last three years. For several years past the trade in refined sugar has been decreasing, while there has been a considerable increase in the exports of unrefined sugar, probably the Indian variety. The rising price of the refined article militates against its popularity. The export of Indian tea was little more than half that of 1913-14—the result, no doubt, of a rise in price from Rs. 25 to Rs. 42 per maund in the past three years. The export of China tea, on the other hand, nearly doubled in the last year, as the difference between its price and that of Indian tea grew less. In the declining exports of woollen goods the effects of the war are once more apparent. Mills were too busy with Government contracts to do much work for other markets. The value of exports to Central Asia during the triennium exceeded the value of imports from that territory by Rs. 14,50,142. The balance was partially liquidated by a net import of treasure to the value of Rs. 3,36,549, including Russian paper money. This has depreciated in the Punjab by about 15 per cent. of its face-value and the amount imported last year was insignificant.

214. The balance of trade with Tibet is still largely against India. The trade in borax diminished steadily. In the year, 1907—1910 as much as 6,556 maunds were imported. In the last three years only 2,081 maunds passed the registration posts. It is a far cry from America to Tibet, but according to the report of the Director of Commercial Intelligence the discovery of calcium borate in America is probably responsible for the diminution of imports from Tibet. Salt is to a great extent used as an Trade with Chinese Tibet.

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article of barter in exchange for grain, and its import is affected by the amount of grain available for export. The chief import from Tibet is raw wool. During the past three years the trade in this commodity remained fairly steady, and the total imports showed a constant and considerable increase throughout the last triennial periods.

215. The war was responsible for a fall in the export trade in European cotton piece-goods, which were to some extent replaced by those of Indian manufacture. High prices restricted the exports of grain, while the stoppage of supplies from Central Europe was the chief cause of a heavy fall in the export of refined and unrefined sugar.

JOINT STOCK COMPANIES.

216. The number of registered companies with share capital continues to decrease, and only 77 remained active during the year; others are under liquidation or are being struck off. The indigenous companies are rapidly disappearing leaving as survivors those under British and sound Indian control. The capital invested is diminishing, the sum paid up is Rs. 2,98,260 less than last year. Promoters of new concerns shew a preference for registration as private companies which are exempt from the necessity of employing certificated auditors.

217. The local Insurance and Provident Insurance Companies continue to decline in number. The small indigenous companies continue to disregard generally the provisions of the Indian Companies Act and where warnings fail, prosecutions have to be instituted.

34.—Buildings and Roads.

Total expenditure.

218. The total outlay on Public Works in the Buildings and Roads Branch amounted to 68½ *lakhs*. The reduction of last year's figure by 14½ *lakhs* was mainly due to economy in view of the war.

Imperial Civil Works.

219. The expenditure on original Imperial Civil Works was Rs. 1,23,000, and Rs. 45,000 were spent on repairs. A residence and an office for the Camel Specialist were completed at Sohâwa, the total cost of which was Rs. 20,250.

Imperial Military Works.

220. Only Rs. 6,000 were spent on original Military Works, the cost of repairs amounting to Rs. 29,000.

Provincial Civil Works.

221. The department spent on original Provincial Civil Works Rs. 23,38,000 and Rs. 18,11,000 on repairs. The King Edward Memorial at Lahore was opened by the Viceroy on December 10th, 1915. The completion of the scheme will provide the capital of the Province with an exceptionally complete system of buildings for hospital treatment, medical education, and original research. On the same day the Viceroy opened the Veterinary College at Lahore built at a cost of Rs. 6,55,000.

Sanitary Works.

222. The completion reports of the Simla hydro-electric schemes reported a total outlay of Rs. 19,07,000. The electric lighting scheme underwent its first extension of 500 kilowatts. The financial returns of the electricity department exhibited most encouraging results, and the Simla Municipality is to be congratulated on possessing such a satisfactory investment. Financial stringency forbade progress with the schemes recommended by the Simla Improvement Committee of 1914. The tube well water supply at Siálkot was formally inaugurated by the Lieutenant-Governor and made over to the Municipality for maintenance. Its success fully justified this new departure in large water supply schemes. The extension of the Lyallpur water-supply was begun by the addition of two filter beds which were urgently required. Drainage schemes were in hand at Majítha in Amritsar District, Ráwalpindi, Wazírabad and at Tandliánwála in Lyallpur District.

223. The alterations and extensions to Government House, Lahore, referred to in last year's report, were completed with minor exceptions. Civil buildings.

Roads were aligned and trees planted on the site acquired last year at Lahore for houses for Government officials.

The Consulting Architect's scheme for the replanning of "Charing Cross," in Lahore, began to materialise. With the attainment of its object the administrative centre of Lahore will, it is hoped, assume a dignity worthy of the capital of the Province. War expenses postponed the supply of electricity to work the grain elevator at Lyallpur, the construction of which was completed. An agricultural station was under construction during the year at Hánsi, and quarters were built for the Assistant Professor of Botany at the Lyallpur Agricultural College.

224. Work was in progress on a masonry bridge over the Dodni nullah on the Hoshiárpur-Dharmsála road. On the Hindustán-Tibet road a bridge thrown over the Shiassu river to place a steel wire rope crossing will save Kanáwari traders a long detour. Other works in this district include a steel truss bridge over the Machada stream near Rámpur, and a tubular truss of novel design over the Nogli river on the Upper Forest road near Taklech. Altogether Rs. 2,82,000 were spent on new works and 13 *lakhs* on the repair of existing communications. Communications.

225. The physical laboratory for Government College, a companion building to the recently finished biological laboratory, was nearly completed. The high schools with boarding-houses at Lyallpur, Siálkot, Gujránwála, Gurdáspur and Hoshiárpur were finished. Expenditure on educational works during the year amounted to 6 *lakhs*. Educational.

226. Work for the Police Department absorbed Rs. 2,36,000 and included quarters at Lahore Cantonment for European Police Inspectors and police stations in ten towns. Police.

227. Extensive improvements to the Walker Hospital at Simla were completed at a cost of Rs. 1,38,000, and the buildings are now up to date and efficient. Funds for the new approach road which greatly improves the access to the hospital were generously provided by Sir James Walker. Medical.

228. Satisfactory progress was made with the extension of the Punjab University Library at Lahore which was rearranged and re-catalogued on modern lines. Contribution works.

229. The Buildings and Roads Branch has contributed a very large proportion of its officers to war service. The sanctioned strength is 43 officers, and out of these 5 Royal Engineer Officers are on military duty, 5 Imperial Civil Engineer Officers are serving in the Indian Army Reserve, and 2 Imperial Civil Engineer officers are at the disposal of the War Office. Establishment.

34-A.—Railways.

230. The Jullundur City to Tánda-Urmar section of the Jullundur Mukerián Railway was opened to traffic in June 1915, and the Tánda-Urmar to Mukerián section in the following October. The Mandra-Bhon line and the Siálkot-Nárowál line were opened in February 1916, adding 129 miles of 5-feet 6-inch gauge railway to the Province.

231. At the end of the year there were 4,398 miles of railway in the Province. Of this total the State owned 2,841 miles and worked 3,748 miles, and companies owned 1,286 and worked 588 miles. Native States owned 271 miles, of which they worked 62 and the State 209 miles.

PRODUCTION AND DISTRIBUTION.

35.—Irrigation.

GENERAL.

232. During the year the direct receipts amounted to Rs. 2,47,97,985 and the expenditure to Rs. 1,64,79,374 as against Rs. 2,55,74,433 and Rs. 1,99,42,412, the average of the previous triennium. The expenditure, as divided between Capital and Working Expenses, was Rs. 47,23,095 and Rs. 1,17,56,279, respectively; the former included Rs. 41,18,752 expended on the construction of the Triple Canals. The indirect revenue credited to the canals amounted to Rs. 1,17,60,597 as against Rs. 1,03,80,159, the average of the triennial period ending 1914-15.

233. The total area irrigated by works of all kinds and the area matured was 8,884,811 and 8,448,987 acres, respectively, showing a decrease of 78,230 and 158,778 acres, respectively, over the figures of 1914-15. The figures, however, give an increase of 239,053 and 228,457 acres, respectively, over the average of the previous triennium, due to the development of irrigation on the Upper Chenab and Lower Bari Doab Canals. But excluding the triple canals the decrease in the area irrigated and area matured comes to 285,500 and 334,849 acres, respectively, as compared with the figures of the previous year, mainly due to the very unfavourable season caused by the almost total failure of the monsoon.

234. The financial results of the operations of canals classed as Productive Major Works and the area irrigated by each is shown in the following statement :—

1	2	3	4	5	6	
					Percentage of profit on the Capital Outlay.	
Name of Canal.	Area irrigated.	Gross income.	Working expenses.	Net income	Excluding interest charges.	Including interest charges.
	Acres.	Rs.	Rs.	Rs.		
Western Jumna ...	825,083	30,06,351	14,05,414	16,00,937	9·04	5·73
Sirhind	1,507,067	32,27,340	12,38,858	19,88,482	7·78	4·47
Upper Bari Doab ...	1,145,234	47,18,969	13,72,565	33,46,404	15·29	11·97
Lower Bari Doab ...	283,294	5,53,497	6,50,985	—97,488	—0·46	—3·79
Upper Chenab ...	325,062	10,17,333	8,33,808	1,83,525	0·53	—2·79
Lower Chenab ...	2,284,079	1,59,22,240	32,71,993	1,26,50,247	39·78	36·40
Upper Jhelum ...	...	6,234	3,42,150	—3,35,916	—0·79	—4·12
Lower Jhelum ...	834,176	41,21,783	8,17,859	33,03,924	20·70	17·37
Upper Sutlej Inundation Canals.	272,746	7,46,103	4,09,708	3,36,395	18·50	15·23
Sidhnai	270,150	8,32,779	1,46,592	6,86,187	51·55	43·18
Indus Inundation Canals	235,641	4,37,175	4,41,584	—4,409	—0·14	—3·44
Total ...	7,982,532	3,45,89,804	1,09,31,516	2,36,58,288	10·90	7·59

235. The Upper Jhelum Canal, the final link of the Triple Canal Project, was opened for irrigation on the 7th October 1915. Thus the year saw the completion of the great Triple Project, and the ceremony to celebrate this completion was performed at Mangla, the Headworks of the Upper Jhelum Canal, on the 9th December 1915, by His Excellency Lord Hardinge of Penshurst, the late Viceroy.

236. The total cost of all the Productive or Major Irrigation Works in operation at the end of the year 1915-16 was Rs. 23,24,13,967 including Rs. 1,54,62,483 contributed by Native States. The total outlay on the Triple Canal Project was Rs. 9,79,44,704, *viz.*, Rs. 4,23,61,119 on the Upper Jhelum, Rs. 3,45,01,593 on the Upper Chenab and Rs. 2,10,81,992 on the Lower Bari Doab Canal.

The net revenue earned was Rs. 2,36,58,288, giving a profit of Rs. 10·90 per cent. on the capital invested (Rs. 21,69,51,484). Excluding the Triple Canals, which, though opened, were not working properly, the percentage comes to 20.

237. On all the Imperial Minor Canals which are not classed as Productive, including the canals for which capital accounts are kept, the net revenue earned amounted to Rs. 9,44,305 as against Rs. 9,47,214 in 1914-15.

There were only two Provincial Canals in operation, *viz.*, the Shahpur Provincial Canals and the Ravi Inundation Canals; the latter now cease to exist as the area commanded by these canals has been brought under the command of the Upper Chenab and Lower Bari Doab Canals. The net revenue on these canals was—Rs. 5,707.

The details for each canal are given below :—

Maior Works Canals in operation.

238. The area irrigated was a distinct improvement on previous years, due to the recent improvements in channels and the scientific designing of them; the gross revenue collected during the year was Rs. 30,06,351, or Rs. 2,28,775 less than the average for the triennium ending 1914-15. Working expenses were Rs. 1,09,614 more than the average of the previous triennium owing to heavy expenditure on silting reaches and improvements to banks of channels and clearance of drains recently taken over from the Civil Department. **Western Jumna Canal.**

A temporary Division was formed for 6 months to work up the projects for (*a*) a high dam across the Jumna at Koch, proposals for which were finally abandoned by the Government of India as suitable foundations could not be found, and (*b*) Remodelling works at Dadupur and Tajewala, proposals and estimates for which are under consideration.

239. The gross area for the year was the second best on record, the highest being in the year 1911-12, when 1,609,458 acres were irrigated followed by 1,476,782 acres in 1912-13. The area for the year was in excess of either of the two previous triennia. As compared with the figures of the previous year the kharif area was 9·6 per cent. short, whereas the rabi area was 38·15 per cent. in excess. The net revenue earned by the British branches amounted to Rs. 19,88,482 or 7·78 per cent. on the capital invested. The result compares unfavourably with the figures of the previous year, owing mainly to a very poor rabi area of 1914-15, which was the lowest since 1910-11, and to an uncollected balance of Rs. 1,35,496. **Sirhind Canal.**

240. The area irrigated was 1,145,234 or 16,713 acres less than the average of the previous triennium. It was, however, an improvement over the average of the triennial period ending 1911-12. In spite of the failure of the monsoon and the almost total absence of winter rains the agricultural conditions were fairly satisfactory. Owing to absence of rain during rabi, the straw was short, but the grain outturn was better **Upper Bari Doab Canal.**

PRODUCTION AND DISTRIBUTION.

than might have been expected and the year was, on the whole, a prosperous one for the cultivators. The net income amounted to Rs. 33,46,404 or 15·29 per cent. on the capital invested against 13·65 per cent. of the previous year.

Lower Bari Doab Canal.

241. The gross receipts amounted to Rs. 5,53,497 and the working expenses to Rs. 6,50,985, resulting in a deficit of Rs. 97,488 against a net revenue of Rs. 1,67,844 in 1914-15. This result was due to a heavy expenditure incurred on the staunching of channels in leaky places. In October 1915 the 1st Division of this canal, hitherto purely a constructive division, was converted into a revenue one. The working of this canal is not yet fully established as the Upper Jhelum Canal, which was opened in December 1915 is not yet able to carry the full supply intended.

Upper Chenab Canal.

242. The expansion of irrigation has been steady but not so rapid as anticipated in the project forecast in which it was expected that an area of 500,000 acres would be irrigated in 1915-16 ; this failure to rise to expectations was largely due to the unforeseen delay in opening the Upper Jhelum Canal.

Lower Chenab Canal.

243. Compared with the figures of 1914-15 the area irrigated was short by 28,134 acres, but it exceeded the figures of either of the two previous triennia. The net revenue amounted to Rs. 1,26,50,247 or 39·78 per cent. on the capital outlay against Rs. 1,32,53,785 or 41·81 per cent. in the previous year. The year was abnormally dry in both crop seasons and this resulted in a shortage in kharif area and necessitated special remissions in the rabi. The increased expenditure on the improvement of the right bank defence work at Khanki also accounted for part of the decrease in net revenue.

Upper Jhelum Canal.

244. This canal was opened for irrigation on the 7th October 1915. A revenue account was opened during the year. The receipts amounted to Rs. 6,234 and the expenditure to Rs. 3,42,150 showing a deficit of Rs. 3,35,916 as against the project anticipated revenue of Rs. 2,22,500. The reason for this deficit was that no irrigation was done during the year and the above receipts were from rent of buildings and some other miscellaneous sources.

Lower Jhelum Canal.

245. As compared with the previous year the area irrigated during kharif was less whereas that irrigated in rabi was more. The decrease was due to the exceptionally hot dry weather, to insect pest and to disease, while the increase was attributed to the failure of the winter rains, whereby the area that was sown *barani* had to be matured by the canal. The return of 20·70 per cent. on the Capital Outlay was about 1 per cent. less than in the preceding year, due to remissions of about one lakh of rupees on account of failure of cotton in kharif 1915.

A Project Division was formed on 27th June 1916 for the purpose of remodelling the Canal and its distributaries so as to take advantage of any gain of command that has occurred through the gradual silting processes that have been going on since the canal was opened and to secure uniformity of action and progress in the very important work of bringing the outlet system up to modern requirements.

Upper Sutlej Inundation Canals.

246. The net area assessed exceeded by 174 acres the average of the triennium ending 1911-12, while it was short by 70,432 acres as compared with the average of the previous triennium. Excluding, however, the record year of 1914-15, the figure is less by 22,000 acres than the average of the 10 previous years. Considering that the year under review was one of extreme drought, the result should be considered satisfactory. The net revenue of Rs. 3,36,395 gives a return of 18·50 per cent. on the capital invested. It was 14·59 per cent. in 1914-15.

Sidhnai Canals.

247. The results of the working of these canals were eminently satisfactory. Figures of irrigation showed some reduction on those of the preceding year which was an exceptional one. The rabi area was remarkably good in view of the very small amount of rainfall.

Indus Inundation Canals.

248. The decrease in kharif was attributed to a paucity of supply in some of the canals owing to a low river and absence of heavy floods. This decrease was partly made good by the rabi area which is the second largest on record. The financial results are again disappointing, mainly due to the fact that the heads of these canals require constant changes and heavy maintenance charges.

249. The following table exhibits the financial results of the operations of Imperial and Provincial Canals and the area irrigated by each :—

1	2	3	4	5
Name of Canal.	Area irrigated.	Gross income.	Working Expenses.	Net income.
	Acres.	Rs.	Rs.	Rs.
Shahpur Canal (Imperial)	26,759	92,201	52,887	39,314
Ghaggar Canals	25,174	17,540	36,013	—18,473
Lower Sutlej Inundation Canals ...	283,572	6,21,610	2,85,454	3,36,156
Chenab Inundation Canals	170,485	4,71,364	1,72,292	2,99,072
Muzaffargarh Inundation Canals ...	377,395	6,46,213	3,57,977	2,88,236
Shahpur Canals (Provincial)	18,894	36,359	40,953	—4,594
Total ...	902,279	18,85,287	9,45,576	9,39,711

Shahpur (Imperial) Inundation Canals.

250. The area matured was 23,047 acres as against 40,953 acres, the average of the previous triennium, the decrease being due to unfavourable rainfall and to the inadequate river supply, as well as to the heads of the Eastern and Western Station Canals not being worked satisfactorily on account of a change in the position of the river during flood and consequent silting up of the feeding creek.

Ghaggar Canals.

251. Including the *paleve* area (7,198 acres) which was watered but not sown and on which no water-rates were charged, the total area irrigated was 32,372 acres. As remarked last year these canals receive no credit for any fluctuating revenue up to Rs. 37,000 and the method of accounting always shows a loss in working.

Imperial Minor Works with Revenue Accounts only.

Lower Sutlej Inundation Canals.

252. The area irrigated, though less than that of the preceding year, was greater than in any of the years 1909-10 to 1913-14.

Chenab Inundation Canals.

253. The area irrigated was below the average. This was due to low supplies in the river and to absence of rain. The total yield of wheat was better than in the previous year, though the area was less.

Muzaffargarh Inundation Canals.

254. Notwithstanding the abnormally low rivers and absence of high floods a good steady supply was maintained in all the Canals except the Ganesh (from the Chenab) and the Suleman (from the Indus). The failure of the former was due to the silting of the feeder, whereas that of the latter was due to the supply being short at the beginning of the season owing to heavy erosion and consequent shoaling of the feeder.

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Although the area irrigated fell short of that in 1914-15, the area matured was greater. The percentage of area failed was lower, *viz.*, 6·7 per cent. against 14·0 per cent. of the preceding year and 10·4 per cent. of the previous triennium. The area irrigated during the rabi was the highest on record.

Shahpur (Provincial) Inundation Canals.

255. The year's working showed a loss of Rs. 4,594 due to lack of supply and rainfall.

Ravi Inundation Canals.

256. Last year it was stated that the only canal doing irrigation as an Inundation Canal under this system was the Jherku Canal in the Montgomery District. This year that canal also was excluded from the operations of the Punjab Minor Canals Act and the area was transferred to the Lower Bari Doab Canal. Thus the Ravi Inundation Canals now cease to exist.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1915.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the year 1915-16.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1915-16.

Stamps.—Note on the Administration of the Stamp Department of the Punjab for the year 1915-16.

Income-Tax.—Report on the Income-Tax Administration of the Punjab during the year 1915-16.

Forests.—Progress Report of Forest Administration in the Punjab for 1915-16.

Provincial Revenues.—Audit and Appropriation Report on the Accounts of the Punjab for 1915-16 and Financial Statement published in the *Punjab Gazette*, Part V, of 24th March 1916.

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1915-16.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1915-16.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume I—Commercial Statistics.
Volume II—Financial Statistics.
Volume IV—Administrative and Judicial (including area, population and local funds).

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1915-16.

36.—Gross Revenue and Expenditure.

257. The following table shows the receipts under the various heads of revenue in the year under report :—

MAJOR HEADS.	Imperial. Rs. 1,000.	Provincial. Rs. 1,000.	Total. Rs. 1,000.	+ / − On figures for 1914-15. Rs. 1,000.
Land Revenue	1,39,88	1,39,89	2,79,77	−480
Opium	6,16	...	6,16	+1
Salt	46,15	...	46,15	−64
Stamp	29,05	29,06	58,11	+3,73
Excise	35,30	35,30	70,60	+1,39
Provincial rates	...	31	31	−8
Customs	8	...	8	+2
Income-tax	9,28	9,28	18,56	+68
Forest	...	17,27	17,27	+2,89
Registration	...	3,56	3,56	+3
Tributes	1,45	...	1,45	+1
Interest	2,27	2,46	4,73	+1,92
Law and Justice—Courts of Law ...	...	5,68	5,68	−20
Law and Justice—Jails	...	4,44	4,44	+35
Police	...	1,99	1,99	+26
Education	...	4,91	4,91	+14
Medical	...	78	78	−8
Agriculture	...	2,27	2,27	+54
Scientific and Miscellaneous Departments	...	27	27	+20
Receipts in aid of superannuation ...	1,19	1,02	2,21	+23
Stationery and Printing	53	82	1,35	−23
Miscellaneous	3,20	4,30	7,50	+2,70
Irrigation—Major Works	1,72,99	1,72,98	3,45,97	+25
Irrigation—Minor Works	8,90	67	9,57	−25
Civil Works	82	3,61	4,43	−64
Total	4,57,25	4,40,87	8,98,12	+8,43

258. The gross expenditure, excluding expenditure of the Military, Railways, Post Office and Telegraph Departments and capital expenditure on canals was as follows :—

Major heads.	Imperial. Rs. 1,000.	Provincial. Rs. 1,000.	Total. Rs. 1,000.	+ or − on figures for 1914-15. Rs. 1,000.
Refunds	84	87	1,71	+ 27
Assignments	53	33	86	+ 10
Land Revenue	...	49,47	49,47	+ 40
Salt	5.16	...	5,16	— 41
Stamps	89	89	1,78	— 7
Excise	1,13	1,13	2,26	— 11
Income-Tax	6	6	12	+ 1
Forests	...	9,24	9,24	— 35
Registration	...	1,26	1,26	— 4
Interest	1,47	2,01	3,48	— 36
General Administration	4,39	12,41	16,80	+1,05
Law and Justice—Courts of Law ...	...	47,44	47,44	—1,41
Ditto Jails	...	17,94	17,94	—2,08
Police	...	64,25	64,25	—1,76
Education	...	44,10	44,10	—1,90
Ecclesiastical	2,61	...	2,61	— 15
Medical	...	19,66	19,66	+8,57
Political	6,22	...	6,22	+ 2
Agriculture	27	11,83	12,10	— 24
Scientific and Miscellaneous Departments	...	1,39	1,39	— 38
Pensions, Territorial and Political ...	2,24	...	2,24	—1,51
Superannuation	3	23,15	23,18	— 54
Stationery and Printing	31	7,65	7,96	+ 4
Miscellaneous	67	3,67	4,34	+1,75
Famine Relief	6,89	1,58	8,47	— 6,50
Reduction or avoidance of debt ...	...	1,40	1,40	...
Irrigation, Major Works	87,94	87,95	1,75,89	—17,13
Ditto Minor Works	9,12	2,03	11,15	+ 64
Civil Works	3,98	65,47	69,45	+27,83
Total ...	1,34,75	4,77,18	6,11,93	+5,74

37.—Land Revenue.

259. As explained in paragraph 497 of the Administration Report for 1911-12 the land revenue as given in the Land Revenue Report is that for the agricultural year ending 30th September, six months preceding the end of the financial year, so there must always be a difference in the total collections as calculated by the Treasury and by the Financial Commissioners' Office in their yearly returns.

260. The Land Revenue Report for the year ending 30th September 1915 shows the following figures for collections including those on account of previous years, comments on which have already been made in section 10 dealing with demands :—

	Rs.
Fixed Land Revenue	2,22,07,367
Fluctuating Land Revenue	1,28,48,849
Temporarily excluded from fixed Land Revenue Roll.	7,31,082
Other Land Revenue	41,91,257
Total ...	3,99,78,555

38.—Irrigation.

Irrigation.

261. The total capital invested up to the end of 1915-16 on canals in operation classed as Productive Major Works was Rs. 21,69,51,484 ; figures for the Upper Jhelum Canal are for the first time included. Capital expenditure during the year amounted to Rs. 48,20,389. The income from all sources, excluding refunds, was Rs. 3,46,89,804. Working expenses totalled Rs. 1,09,31,516. Interest charges amounted to Rs. 72,37,023. The net profit left was Rs. 1,64,00,000 as against Rs. 1,94,00,000 in the previous year.

262. The balance profit on Imperial Canals, Minor Works, not classed as Productive, was Rs. 9,44,305 as against Rs. 9,47,214 in 1914-15. Provincial Canals show a deficit of Rs. 5,707 as against a profit of Rs. 26,215 in the preceding year.

39.—Excise and Opium.

263. The year 1915-16 was marked by a further decrease in the consumption both of country spirit and opium. This was mainly a consequence of the increase in prices arising from the enhanced taxation of those intoxicants, but was also partly due to the continuance of the war and the prevalence of high prices generally, coupled with the partial failure of the autumn crops and the poor spring harvest prospects. The year was also signalized by a general enhancement of excise taxation. The still-head duty on country spirits and the issue price of excise opium were raised at the commencement of the year and the import duty on foreign spirits (including the Punjab products so classed) was raised towards its close. There was a large fall in the receipts from country spirit, vend fees (which declined by over 3 lakhs) and the malt liquor duty. The position was to some extent retrieved by the opium sale receipts. The financial result of the year's working was that the total revenue of the department increased by Rs. 87,787 to Rs. 70,08,878. General.

264. The enhancement of the still-head duty on country liquor from Rs. 5 to Rs. 6-4-0 per gallon resulted in an increase of over 2 lakhs under this head, and the raising of the issue price per seer of excise opium from Rs. 20 to Rs. 25 accounted for a rise of 3 lakhs in the receipts under the head of opium.

265. Though the Excise revenue is increasing, and has in fact, mainly owing to enhanced taxation, practically doubled in the last 10 years, the number of retail opium and country spirits shops has, in the same period, been reduced by 30 per cent. and the consumption of country spirit has fallen by no less than 24 per cent.

266. A decrease of 13 per cent. in the consumption of country liquor during the year, though largely due to the rise in retail prices, the departure of troops and general high prices is, in a great measure, the results of the efforts of the administration to assist the cause of temperance reform. The number of retail licenses for the sale of country spirit was further reduced during the year to 720 and stood at one for every 27,150 of the population, against one for every 15,525 persons ten years ago. Licenses at fairs were greatly restricted, and in Amritsar all liquor shops were removed from the interior of the city to Municipal premises in the outskirts. Liquor.

267. Valuable suggestions were received from local and municipal bodies which co-operated most usefully with Collectors as advisors on questions of excise policy. Private societies extended their aid and temperance teaching was vigorously promoted in many of the Schools and Colleges of the Province. Evidence of the good work done in this direction is found in the further decrease in the number of convictions for drunkenness by 170 to 961.

268. The trivial extent of the decrease (by 2,000 seers, or less than 4 per cent.) in the recorded consumption of excise opium, in spite of an advance of 10 per cent. in the retail price, proved the opium habit to be much less affected than the drink habit by considerations of price. Opium.

269. The restriction of the import of hill opium into Nabha and its total prohibition in the case of Jind and Maler Kotla resulted in a shrinkage of the amount supplied to Native States by 51 per cent. A proposal to close down all supplies of this kind of opium to British districts and Native States alike came under consideration of Government. Such a measure could put a stop to cultivation of this drug in the Province and would deal a severe blow at the large illicit traffic in opium which is believed to exist between certain Native States and Calcutta.

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REVENUE AND FINANCE.

Charas.

270. There was a negligible increase in the consumption of *charas*. An increase of over 13,000 sers in the consumption of *bhang* was partly explained by the unusual heat of the summer of 1915 and the consequently abnormal demand for this cooling drink.

Cocaine.

271. There was no expansion in the traffic in cocaine, probably as a result of the war and diminished supplies.

Excise offences and preventive measures.

272. There was a slight improvement in the proportion of persons convicted to persons arrested for excise offences. The latter increased in number from 1,023 to 1,080. Exceptional efforts were made to cope with illicit distillation, and the detection of 223 cases in the campaign mentioned in last year's report amply justified the special measures adopted.

40.—Salt Revenue.

Cis-Indus and Kalabagh Mines.

273. The quantity of salt excavated during the year was 4,035,890 maunds, or 4·88 per cent. more than in 1914-15. 3,981,289 maunds or 0·46 per cent. more than last year were issued, and the sales amounted to over 40 lakhs of maunds, a decrease of 4·84 per cent.

274. The price, 1 anna 6 pies a maund, remained unchanged during the year under report. There was a net profit of Rs. 38,190 as compared with a profit of Rs. 9,541 in 1914-15.

275. The through traffic sales which amounted to over 35¼ lakhs declined by 197,037 maunds or 5·28 per cent. and formed 94·04 per cent. of the total rail-borne trade of the division as compared with 94·43 per cent. in 1914-15.

Mandi Mines.

276. The sales from the Mandi Mines, 103,771 maunds, were more by 26,716 maunds or 34·67 per cent. than the sales of the previous year.

Sultanpur Salt Works.

277. The sales of Sultanpur salt increased by 10,818 maunds to 37,854 maunds. The price at which salt was sold by the manufacturers at the Sultanpur Salt Works ranged from 4 annas to 9 annas a maund, the average price being 6 annas 6 pies a maund as compared with 5 annas a maund in the preceding year.

Internal Branch.

278. Fees from licenses for the manufacture of saline substances realised Rs. 4,198 as compared with Rs. 4,846 in 1914-15.

General.

279. Excluding the operations of the Internal Branch, complete provincial figures of which are not published, the accounts for the Punjab, including excise duty, are as follows :—

Source.	*Receipts.*	*Charges.*	*Net receipts.*
	Rs.	Rs.	Rs.
Cis-Indus	45,63,103	5,00,982	40,62,121
Mandi	13,266	5,032	8,234
Sultanpur	38,783	10,023	28,760

41.—Stamp Revenue.

280. Receipts under the Stamp and Court Fees Acts contributed Rs. 58,19,745 to the State revenues, a sum exceeding the income of the previous year by Rs. 3,77,857 and that of 1913-14 by Rs. 1,90,521. Receipts under judicial or court fee stamps accounted for more than two-thirds of the whole increase. This was variously explained as due to increased litigation, the institution of civil suits of high values, and the good spring harvest of 1915 which led creditors to realise their debts by legal process. The fact that 24 out of 28 districts reported increases in revenue of this kind is, no doubt, indicative of a tendency of affairs to revert to pre-war

conditions. In the case of receipts from the sale of non-judicial stamps also this tendency, though less marked, was definite. These rose to Rs. 19,68,957 in 1915-16 after a fall of nearly a lakh and-a-half attributed to the dislocation of business caused by the war in the previous year.

281. The expenditure of the Department rose from Rs. 2,21,498 in 1914-15 to Rs. 2,40,823 in the year under report.

42.—Income Tax.

General.

282. In budgetting for this year, 1915-16, the circumstances of the time appeared to justify provision for a fall in collections of income tax. What actually happened was an increase by 3½ per cent. from 17·48 lakhs to 18·12 lakhs of rupees, a very satisfactory result in view of the fact that assessments were based on the profits of the year in which war began. Many trades reaped large profits from the outbreak of the war. Those who held stocks of articles commonly imported from hostile countries profited exceedingly. Dealings in grain were generally brisk and money was made on the rise in prices. On the whole, the mercantile classes in the Punjab did not appear to suffer from the war.

Profits of companies.

283. Profits of companies are an almost negligible feature in the Punjab. Out of Rs. 96,000 the Southern Punjab Railway accounts for Rs. 73,000, and a decrease of Rs. 14,500 in their assessment explains the greater part of the decrease of Rs. 22,500 under this head.

284. The amount returned as paid on account of interest of securities of companies is now Rs. 2,045. Only five companies were reported to be issuing debentures.

Part IV.

285. The collections in respect of the year's assessment under Part IV (other sources) rose from 1,227 to 1,322 thousands of rupees, an increase of 8 per cent. Part of this increase is due to the trading classes on the whole having profited from the war and part to the increased care which is being paid to assessment. It is satisfactory to note that the percentage of collections under Part IV due to the lowest class (incomes under Rs. 1,250) fell to 16.

Group assessment.

286. The group system of assessment was tried in fifteen districts, but the results were not very encouraging. In Siálkot, its original home, it was abandoned as unworkable. It was, however, determined to persevere with the system, as existing methods of assessment left so much to be desired, and any expedient offering a promise of even local success in sympathetic hands deserved a full trial.

287. The special assessment of Jullundur City and Cantonments was carried out during the year and resulted in an increase of over Rs. 16,000. A special staff, consisting of an Extra Assistant Commissioner and three Naib Tahsildars and establishment, was sanctioned for the revision of the assessment in the towns of Lahore Division, Ferozepore and Ludhiána. The result had not been communicated to Government by the close of the year

43.—Fore st Revenue.

288. The following figures show the revenue and expenditure of the Forest Department under major heads for the year ending June 30th, 1916:—

Revenue.	Rs.
Timber cut from forests by Government agency ...	4·06 lakhs.
Timber removed by purchasers and consumers ...	11·46 „
Drift and waste wood	0·39 „
Revenue from forests not managed by Government	0·03 „
Other heads	1·24 „
Total ...	17·18 lakhs.

Expenditure.		Rs.
Conservancy and works ...	...	4·40 lakhs.
Establishment	...	4·83 „
Total	...	9·23 lakhs.

289. The income and expenditure exceeded the amounts for the preceding year by Rs. 2 52 lakhs and Rs. 0·21 lakhs, respectively. The increase in revenue was chiefly due to a larger outturn of timber and higher prices. There was also an expansion of the resin industry and a favourable market for its products.

290. The year's working resulted in a net surplus of Rs. 10·56 lakhs, made up as follows :—

		Rs.
Cash surplus	...	7·95 lakhs.
Increase in value of stock ...	...	1·07 „
Increase of outstanding revenue	...	0·10 „
Capital expenditure less interest	...	1·44 „
Total	...	10·56 „

44.—Provincial Revenue and Expenditure.

General.

291. The provincial shares of the revenue raised and the expenditure incurred in the Punjab during the last two years, with the opening and closing balances in each year, are shown in the table below :—

		1914-15.	1915-16.
	Rs.	(thousands).	Rs. (thousands).
Opening balance ...	...	*70,92	52,21
Income ...	...	4,35,93	4,40,87
Net transfers from Imperial to Provincial.		40,13	47,65
Total	...	5,46,98	5,40,73
Expenditure ...	...	4,94,77	4,77,18
Closing balance	...	52,21	63,55

*Excludes 1 crore surrendered to the Government of India from 1st November 1914.

Income.

292. There was a falling off of about Rs. 2,39,000 in the provincial share of the receipts from Land Revenue owing to heavy suspensions of the *kharif* instalment.

Receipts under Stamps and Excise increased by Rs. 1,87,000 and Rs. 69,000, respectively. Forests brought in a larger income by nearly 3 *lakhs*, partly owing to arrear fellings in certain areas and partly to larger receipts from the Resin Division. Agricultural receipts went up by nearly half a *lakh*. Public Works receipts decreased by about Rs. 40,000. The provincial revenue in the aggregate, excluding that from assignments, increased by nearly 5 *lakhs*.

Assignments.

293. The main reason for the increase of 7½ *lakhs* in the net assignments from Imperial to Provincial revenues is that Rs. 11,27,000 were received in 1915-16, bringing the net provincial revenue from Irrigation to Rs. 41 *lakhs* against nothing in the previous year. An assignment of Rs. 31,000 was given from Provincial to Imperial revenues on account of the change in the classification of the charges for treasure guards employed in the Public Works Department.

Expenditure

294. Charges under the Land Revenue head decreased by Rs. 40,000 Expenditure under Forests increased by Rs. 35,000, chiefly owing to more extensive fellings and to larger expenditure on the demarcation and extension of forests. Charges for Courts of Law increased by Rs. 1,41,000

owing principally to the special tribunals which sat during the winter of 1915-16 and to larger sums being disbursed to witnesses for road money, etc. Jail expenditure also rose to the extent of over Rs. 2 *lakhs* owing to an appreciable increase in the jail population coupled with the dearness of food-stuffs which raised the dietary charges. The increase of about 1¾ lakhs under Police was due to the entertainment of a large temporary force to cope with the increase in crime. Educational charges also increased by nearly Rs. 2 *lakhs* owing to larger grants-in-aid to schools. Expenditure under a number of heads was also swollen by the necessity of providing grain compensation allowance during the whole year owing to the continued high price of cereals, and the total amount thus expended was more than double the three lakhs incurred for this purpose in 1914-15.

A sum of Rs. 1,58,000 was debited to provincial revenues under Famine Relief in consequence of the amount paid to railways for the concessions for carriage of fodder. The expenditure on Irrigation—Major Works—also increased by some Rs. 8½ *lakhs* owing to unexpected outlay on urgent works for the proper maintenance of the canals. These increases were more than counterbalanced by a reduced expenditure of Rs. 8½ *lakhs* under Medical, due to a considerable reduction in the grants made to local bodies for expenditure on sanitary schemes and to some extent to savings in establishment charges on account of officers being deputed to military duty, and of Rs. 26 *lakhs* under 45—Civil Works owing mainly to the operation of the orders of the Secretary of State restricting expenditure generally. The aggregate provincial expenditure showed a decrease of a little over Rs. 17½ *lakhs*.

45.—Local Funds.

295. The gross income of the district boards, Rs. 74½ *lakhs*, fell by Rs. 7½ *lakhs*, owing almost entirely to the curtailment of Government grants for roads, which were less by nearly Rs 9 *lakhs*. At the same time the income was more than double the average, Rs. 39 *lakhs*, of the period 1902-03—1905-06. The total of Government grants was nearly Rs. 25 *lakhs* as against Rs. 32½ *lakhs* in the previous year and other contributions also fell off by nearly Rs. 80,000. Losses in receipts under some of the various heads were more than balanced by gains under others including local rate, the result being a net increase of under 1¼ *lakhs*. On the other hand expenditure rose by about Rs. 11½ *lakhs* to over Rs. 86¼ *lakhs*, the increase being general under ne arly every head.

296. Receipts under education rose by over Rs. 1 *lakh* mainly owing to the larger Government grants. There was, however, also some increase in the amount of fees realised in secondary schools, the income so realised amounting to 13 per cent. of the total expenditure excluding expenditure on buildings. The gross expenditure, exeluding expenditure on buildings, rose by over Rs. 2¼ *lakhs* to over Rs. 23 *lakhs*. Income under the head "Medical" was nearly Rs. 9,000 better than last year, owing to increased Government contributions. "Other contributions" were less by nearly Rs 9,000, but this was due to the failure to obtain the credit of certain contributions due from municipalities in the Rohtak District before the end of the year. Income from fees and from sale of medicines remained stationary at about 10 per cent. of the total income, and represented but a very insignificant fraction of the expenditure which increased by about Rs. 8,000 to nearly Rs. 8 *lakhs*. The Karnal board justifiably spent both actually and relatively more than any board on Medical relief, *viz.*, 17 per cent. of its total expenditure.

297. There was a falling off of nearly Rs. 10 *lakhs* in receipts under the head "Civil Works," chiefly owing to the curtailment of Government grants, which accounted for over Rs. 8½ *lakhs* of the decrease. Expenditure, notwithstanding, rose by about Rs. 11 *lakhs* and this was possibly owing to the generous scale of the grants distributed at the close of

the previous year and to the large balances accumulated in many cases. About Rs. 23½ *lakhs* were spent on communications and Rs. 11¼ *lakhs* on buildings. Establishment charges and contingencies amounted to only 3·07 per cent. of the cost of the works executed.

298. No board allowed its balance to fall below the minimum; but in a number of cases the year closed with dangerously low balances and one board was forced to overdraw in order to meet establishment and other recurring charges payable in the early months of the current financial year.

46.—Municipal Funds.

299. The total income of municipalities (Rs. 74,35,062) was more than Rs. 8¾ *lakhs* less than in the previous year. Octroi receipts rose by more than Rs. 3 *lakhs*, sale of water by Rs. 59,000, sale of land and produce of land by Rs. 39,000, and other various heads, including an item of Rs. 1,22,765 withdrawn from deposit with a bank by a committee, by about Rs. 2½ *lakhs*. These increases were, however, much more than counter-balanced by a falling-off of about Rs. 15 *lakhs* in the amount of loans and grants from Government and decreases of about another *lakh* under various other heads.

300. The fall in income was accompanied by a corresponding decrease in expenditure, which amounted to Rs. 74,93,721 as against Rs. 83,67,181. In 1914-15, however, the apparent expenditure was swollen by the deposit of about Rs. 10 *lakhs*, including the Government grant of Rs. 9 *lakhs* for the Lahore sewage scheme, in saving banks: but, apart from this, expenditure in the year under review was considerably less under a number of heads. The chief decreases were under the heads "Public Works (roads and buildings)" Rs. 1,32,226, "Other Miscellaneous Charges" Rs. 1,21,776, "Water-supply" Rs. 97,691, "Unforeseen Charges," Rs. 22,893, "Permanent Advances" Rs. 33,476, "Police" Rs. 12,000, and "Conservancy" Rs. 44,000. The decrease under the last head was, however, only nominal as there was an expenditure of Rs. 56,279 under the new head "Health Officers and Sanitary Inspectors," which was formerly not distinguished. Other large increases were "Contributions to the Electricity Department" Rs. 3 *lakhs*, due to the opening of the Amritsar works, "Deposits" Rs. 62,526, "Public Instruction" Rs. 88,776, "Hospitals and Dispensaries" Rs. 41,668, "Drainage" Rs. 52,937, "Repayment of loans" Rs. 25,853, "Lighting" Rs. 23,000, "Plague" Rs. 15,530 and "Markets and slaughter-house" Rs. 11,400. Expenditure on public instruction amounted to Rs. 7,72,450 or about 10·3 per cent. of the total, but of this 21 per cent. was met by the income from fees and 21 per cent. from Government grants. "Hospitals and Dispensaries" accounted for rather over 9 per cent. of the total expenditure, and practically the whole of this fell on the general funds of the committees, less than 4 per cent. being recovered in fees. Expenditure on Public Works was considerably less than in the previous year, and the percentage of establishment charges on the cost of works executed was consequently higher.

301. Four municipalities and seven notified areas failed to close the year with the prescribed minimum balance. The closing balance of 13 municipalities and of 25 notified areas was in excess of their expenditure during the year. Government loans amounted to only about Rs. 2½ *lakhs* as compared with nearly Rs. 9 *lakhs* in the previous year. The loans were all granted in connection with water supply schemes, the largest being Rs. 1 *lakh* received by Rewari. Government grants amounted to Rs 5,95,074, of which Rs. 1,91,560 were for educational and medical purposes and Rs. 4,03,514 for general purposes. Under the last head are included grants distributed by the Sanitary Board, of which the principal amounts were Rs. 1,15,617 to Dera Ghazi Khan, Rs. 70,000 to Rewari, Rs. 50,000 to Sialkot for water-supply schemes, and Rs. 42,360 to Rawalpindi and Rs. 8,723 to Gurdaspur for intra-mural drainage schemes.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below:—

PROVINCIAL REPORTS.

Births and Deaths—

Sanitation—Report on the Sanitary Administration of the Punjab and Proceedings of the Sanitary Board for the year 1915.

Medical Relief—
- Notes on the Annual Statements of the Dispensaries and Charitable Institutions of the Punjab for the year 1915.
- Report of the Pasteur Institute, Kasauli, for the year 1915.
- Report on the working of the Punjab Lunatic Asylum for the year 1915.

Vaccination.—Notes on vaccination in the Punjab for the year 1915-16.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume III—Public Health.

47. Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1913-14.]

48.—Births and Deaths.

302. Based on an estimate of population arrived at by the method described in the report for 1914 the birth and death rates for the year under report work out at 41 and 34·1 per thousand. These figures fall short of the rates calculated on the census figures by 2·6 and 2·2 *per mille*, respectively. The population in all the districts of the Province except Simla has increased since 1911, and the provincial total at the close of the year was 20,573,733, a rise of 6 per cent. over the census returns for that year.

303. But for plague, which was responsible for a death-rate of 11·48 per thousand, the year 1915 would have been an exceptionally healthy one, and, excluding deaths from this disease, the death-rate was lower than it had ever been since 1877. With the exception of plague, cholera, and respiratory diseases, none of the classified ailments caused an increased death-rate while the statistics indicated a most satisfactory reduction of deaths from fever compared with the figures for the two previous years, due, no doubt, to the abnormally dry weather in the latter half of the year. The birth-rate, though less satisfactory, compared favourably with the average for the previous five years, and was only slightly lower than in 1911-12 and 1913. The birth-rate in 1914 was exceptional, and a much larger decrease was to be expected than actually occurred.

304. The number of children born during the year was 843,012, of whom 440,955 were males, and 402,057 females, the resulting rates being 43·6, 22·8 and 20·8 *per mille* of the census population. Compared with the previous year there was an all-round decrease of 2·7 *per mille*, Births.

but compared with the last quinquennial average the rate was only 1·3 in defect. The rate for 1915 was presumably affected by plague, and perhaps partly by the absence of young men and those in the prime of life at the war. In Rohtak and Gurgaon, however, the rates were over 50 *per mille*, an excess of 26 *per mille* over the death-rates. As the former is one of the best recruiting districts in the Province, much stress cannot be laid on the second of the reasons suggested. For the whole Province the excess of births over deaths amounted to 7·3 *per mille* of the population.

Deaths.

305. During the year under report 702,550 deaths (359,821 males and 342,729 females) were recorded, as against 618,073 in the previous year, giving a rate of 36·3 *per mille*. The increase of 4·3 was chiefly due to plague, but cholera and respiratory diseases were contributory causes. With the exception of these diseases, dysentery and diarrhœa, the rates all round were lower than in 1914, while the death-rate from fever showed a most satisfactory reduction, and was, in fact, the second lowest recorded since 1877.

306. The death-rate was highest in the Rawalpindi District (57·4) and was above the provincial rate in eleven other districts. It was less than 20 *per mille* in the Dera Ghazi Khan and Simla Districts, and less than 30 in ten other districts. Generally the rates were highest in districts which suffered most severely from plague. Where there was no plague the death-rate was very low.

307. The general death rate in towns was practically the same as that in rural circles, but there were considerable differences in respect of the various causes of death, the rural rate for plague, for example, being 6·03 in excess of the urban rate. In the smaller towns of the Province the variations in the rates were very marked, ranging from 2·40 in Gojra to 68·96 in Gohana. Sixteen other towns had rates of over 50 *per mille*, the high mortality in most cases being due to plague. Of the three principal towns in the Province, Amritsar was the most unhealthy with a death-rate of 43·5 as compared with 33·59 in Lahore, and 33·14 in Multan. The chief cause of this difference is to be found in the high mortality from respiratory diseases which amounted to 14·44 in Amritsar, as compared with 4·97 in Lahore, and ·027 in Multan.

308. March, April and May were the most unhealthy months. Plague was then at its height and the death-rate varied from 4·53 to 6·04. The months from September to December, usually marked by an epidemic of malaria, were healthier than any other period of four months in the year.

Infant mortality.

309. The figures with regard to infant mortality exhibited a very marked improvement. Calculated on the number of births during the year, the mortality among male infants worked out at a rate of 188·02, and among female infants at 189·17, as compared with 208·98 and 211·38 respectively in 1914—figures which themselves were lower than those of the previous year.

310. Efforts made to rectify the statistics of deaths with regard to classes were not successful. The figures for "Other classes" in the districts of Muzaffargarh, Sialkot and Jhang, for instance, resulted in rates of 240, 311·11 and 416·67 respectively. There is little hope of real improvement in this direction until the population is re-classified at the next census.

Cholera.

311. The number of deaths registered as due to cholera was 13,196, the largest number in any year since 1903. Deaths were reported from every district in the Province, 69 towns and 1,678 villages being infected. The Ferozepore and Lahore Districts with 2,890 and 2,657 deaths respectively were the worst sufferers, while among towns the number of deaths was

highest in Kasur, Gohána, Amritsar, Lahore and Kunjah. As in 1903 the chief cause of the outbreak is to be found in the infection spread by pilgrims returning from the great Hardwar Kumb Fair, but a further centre of diffusion was the Ghariala Fair in the Kasur Tahsil, while in the Gujrat District the epidemic started from local causes in two villages, in one case being due to the eating of the flesh of a diseased ox, and in the other to the drinking of water from a polluted well in a graveyard. The experience of the year has thus still further emphasised the importance of conrolling the sanitary arrangements at all large fairs, and in this direction good work was accomplished. Special arrangements were made at the larger fairs under the supervision of the Additional Deputy Sanitary Commissioner, and during the year schemes for the supply of pure water to the fair areas at Gullu Shah and at Nurpur in the Rawalpindi District were approved and assisted by grants-in-aid from the Sanitary Board.

312. Only 1,694 deaths were due to small-pox, the lowest number recorded since registration of deaths was introduced. Eleven districts of the Province were practically free from the disease. An explanation of the happy condition of the Province in this respect was suggested in last year's report which attributed it to the diminution of the number of susceptible individuals, owing to the death or vaccination of those who were not protected, during the long continuance of the epidemic from 1911 to 1913. Small-pox.

313. The death-rate from fevers was, on the other hand, again very high, amounting to 14·73 *per mille*, though this figure represents an improvement on the previous year, which is accounted for by the almost entire absence of malaria in epidemic form. Fevers.

314. The epidemic of plague with which the Province was afflicted in 1915 was the worst since 1907, a total of 244,104 deaths being recorded. The epidemic had commenced in the latter portion of 1914, and the full effects were felt in the first half of 1915. There was, however, but little recrudescence in the latter half of the year owing to the abnormally hot weather, and the efforts of the plague staff in treating the worst infected areas. The Jullundur Lahore and Rawalpindi Divisions suffered most, while the Multan Division escaped comparatively lightly. Despite the severity of the epidemic the special staff were able to afford general medical relief to a large number of persons, thus gaining the confidence of the people and facilitating the effective control of plague. The attitude of the people generally towards plague measures was found, on the whole, to be improving, and it is gratifying to note that some local bodies entertained paid agents to assist in the work, and that much valuable voluntary help was forthcoming. Plague.

49.—Emigration and Immigration.

There is nothing to report under this head.

50.—Medical Relief.

315. No department has been more affected by the war than the Medical Department. Owing to the reversion to military duty of a large proportion of the officers of the Indian Medical Service, Civil Assistant Surgeons held, at the end of the year, fourteen Civil Surgeoncies in excess of the number reserved for them; while 120 Civil Sub-Assistant Surgeons had been surrendered for service under the Army Department. Some 20 Assistant Surgeons applied for temporary commissions in response to the call to them for volunteers for active service. General.

VITAL STATISTICS AND MEDICAL SERVICE.

Institutions and patients.

316. There was a net increase of 6 in the number of dispensaries, 17 having been opened and 11 closed, making a total of 473 institutions. The inadequacy of existing arrangements for medical relief in certain districts engaged the close attention of the Inspector-General, but the financial stringency of the time hampered progress in this direction during the year under report.

317. There was a decrease by 91,565 in the total number of patients treated in general local fund hospitals and dispensaries and purely female institutions during the year, the number being 4,775,820 as against 4,867,385 during 1914. This decrease, which is among out-patients only, was apparent in every district in the Province, and was doubtless due to the entire absence of malaria in epidemic form in consequence of the abnormally dry summer. Of the total number treated, 89,910 were in-patients and 4,685,910 out-patients, the former showing an increase of 1,136 and the latter a decrease by 92,701 compared with the figures of the previous year. Of the total number of in-patients, 67,042 were cured, 13,616 relieved, 5,432 discharged otherwise, and 2,043 died. The ratio of deaths per cent. to the total number of patients treated was 2·27 as compared with 2·31 during 1914.

318. To the number of beds available 252 were added in the year, of which 57 were for females. Much, however, remained to be done in this direction, especially in the provision of wards for infectious and contagious diseases.

Statistics of diseases.

319. The diseases for which relief was most frequently sought at dispensaries are shewn in the following abstract :—

Cholera	1,458
Dysentery	61,875
Malaria	464,486
Rheumatic fever and rheumatism	88,696
Tubercle of the lung	4,658
Diseases of the nervous system	91,757
Diseases of the eye	989,436
All diseases of the respiratory system except, pneumonia and tubercle of the lung	280,208
Dyspepsia	192,757
Diarrhœa	52,443

Surgery.

320. Reference has already been made to the remarkable reduction in the number of patients treated for malaria. It amounted in fact to 210,549. On the other hand, there were large increases in the numbers of patients suffering from diseases of the eye, the respiratory and digestive systems, diseases of the skin and connective tissue, and ulcers, amounting in the aggregate to 182,301 cases.

321. The number of surgical operations performed during the year was 275,506, or 14,731 more than in 1914. The death-rate among patients operated on remained at last year's figure, namely, ·20 per cent. In 95 per cent. of the cases operated on for cataract, of which there were 13,474, the treatment was successful. Moga and Amritsar still head the list of places where most of these operations were performed. There were 2,308

operations for stone in the bladder as against 2,115 in the previous year, Multan and Ferozepore districts showing the largest returns, with Dera Gházi Khan and Jhang following next in order.

Income.

322. Including a cash balance of Rs. 1,82,199, with which the year 1915 opened, the income of the Department from all sources amounted to Rs. 15,79,993. Of this sum, Government contributed Rs. 1,48,692 on account of salaries and otherwise, or about Rs. 65,000 less than in the preceding year. Contributions from local bodies, on the other hand, increased their contributions by nearly as much. Subscriptions received from Europeans and Indians amounted to Rs. 47,337 and Rs. 35,501, respectively, as compared with Rs. 58,825 and Rs. 33,448 in 1914. The expenditure rose from Rs. 13,66,404 in 1914 to Rs. 14,00,144 in 1915, and the year closed with a balance of Rs. 1,79,849.

The Mayo Hospital.

323. The new main block of the Mayo Hospital was completed during the year, and most of the equipment ordered in 1914 was received. The hospital as usual maintained its good record. The surgical work done shewed a large increase, while the percentage of mortality decreased by ·13 per cent., being ·87 per cent. against 1 per cent. in the previous year.

Accommodation for wounded.

324. Besides the 50 beds reserved for them in the Mayo Hospital, there were set aside for the sick and wounded from overseas 80 beds in the Victoria Memorial Hospital at Jullundur and 50 beds in the King Edward Memorial Hospital, Karnal, the Local Government giving a special grant for the up-keep of these military wards. Much help, in the form of both cash and commodities, was received from the public of the districts concerned in doing all possible to ensure the comfort and welfare of the patients.

325. A new zenana hospital was opened at Hissar and a missionary dispensary for women at Montgomery, bringing the total number of female dispensaries up to 24. Attention was directed to the waste of power resulting in the co-existence of municipal and missionary female hospitals in certain localities and the necessity of discouraging such competition. The number of women employed in district and municipal hospitals during the year was 38, including 1 Assistant Surgeon and 19 Sub-Assistant Surgeons. The dearth of workers was still one of the chief obstacles to the spread of female medical aid. A very satisfactory movement was an undertaking by several local bodies to endow stipends for the training of female Sub-Assistant Surgeons, compounders and nurses, and it is hoped that this will help to ensure the steady supply of qualified women to take charge of female dispensaries.

Punjab Lunatic Asylum.

326. The number of patients admitted to the Punjab Lunatic Asylum during the year, including re-admissions, was 311, the highest figure on record. Of these, 237 were males and 74 females. The number of re-admissions was 22. During the year electric lighting and fans were installed, extra accommodation was provided, and the congestion of the female asylum was relieved by the addition of four annexes. With the steady increase in the comforts and amenities of the Asylum, the demand for admission grows more frequent, and the daily average number of inmates during the year (763) was greater than ever before. The year on the whole was a healthy one. There were no epidemics, and both the death rate and the sick list were lower than in any year since 1910. The total cost of the Asylum was Rs. 1,70,788. To its income Rs. 13,109 were contributed by paying patients and Rs. 6,485 by the Asylum manufactories.

51.—Sanitation.

Sanitary Board.

327. The Sanitary Board met three times during the year.

Grants by Government.

328. For the year under report, 8 lakhs were originally allotted to the Sanitary Board for distribution among local bodies, but it was subsequently found necessary to withdraw more than half this sum. Over 3½ lakhs were, however, distributed by the board in aid of urban drainage and water-supply schemes and about Rs. 15,400 for rural sanitation before the financial stringency suspended its activities.

Urban sanitation.

329. The grant for urban schemes was 5 lakhs, of which Rs. 2,59,797 were expended on water-supply schemes for Dera Gházi Khan (Rs. 1,15,617), Rewári (Rs. 70,000), Siálkot (Rs. 50,000), Tandliánwála (Rs. 23,000), and Kálka (Rs. 1,180). Drainage schemes accounted for Rs. 94,249, the largest items being Rs. 42,360 for the Ráwalpindi intra-mural drainage project, and Rs. 21,045 for drainage at Kálka. Rupees 1,200 were spent on experiments and printing.

Rural sanitation.

330. Expenditure on rural sanitation, for which one lakh has been allotted, had reached Rs. 15,399 before the balance was withdrawn. Of this sum, Rs. 7,100 were spent on the Gujrat District scheme.

Miscellaneous.

331. Two lakhs out of the original grant of 8 lakhs were an additional allotment reserved for unforeseen schemes. The whole of this was eventually withdrawn. The Punjab Government accorded administrative sanction to the Gujránwála water-supply scheme estimated to cost Rs. 5,04,918 and a scheme for improvements in Amritsar City costing Rs. 1,63,650. The power delegated to the board last year to sanction sanitary schemes the cost of which does not exceed one lakh was exercised during the year in eight cases, estimates for which amounted in the aggregate to Rs. 2,65,183 and included one of Rs. 92,360 on an improvement to the Ráwalpindi drainage scheme. Technical sanction was received from the Public Works Department to eight estimates amounting altogether to Rs. 44,71,196.

Utilisation of refuse and sewage.

332. The sale of street sweepings realised Rs. 1,28,286, which was Rs. 12,234 less than the income from this source last year. Sewage irrigation was extended by 94 acres giving an additional income of Rs. 845. The area so irrigated in the year under report was 1,842 acres and the profit from it was Rs. 34,333.

Legislation and attitude of the public.

333. The offer of rewards by the Gurgaon District for sanitary improvement in villages evoked no response. On the other hand, works of public sanitary utility were constructed in eight districts by private individuals at a total cost of more than half a lakh. One of the main obstacles in the way of utilising the allotments for rural sanitation has been the rule that a grant-in-aid of a sanitary scheme shall only be made when half the cost of the work is provided from local sources. The subject of rural sanitation engaged the close attention of Government during the year and the question of passing a special Act on the lines of the United Provinces Village Sanitation Act was carefully examined. It was, however, decided that for the present such an Act was not required, and that the Punjab District Boards Act provided all the administrative machinery necessary. In several districts the adoption of simple regulations under this Act to promote the sanitation of villages was approved, and in a number of cases villages agreed to the imposition of taxation in order to meet the cost of elementary measures of conservancy. In such cases, where there is an evident desire on the part of the inhabitants for sanitary progress, it was decided to waive the strict requirements of the rule and to give grants in aid of sanitary works provided the principle of self-help was not disregarded, even when half the cost of such works would not be raised by local contributions. An experiment in the administration of quinine to school children, which was made in Amritsar in the autumn of 1914, met with considerable success. The results achieved were brought to the notice of selected municipalities which were recommended to adopt a similar scheme modified in the light of the experience gained at Amritsar.

Fairs.

334. The prevalence of plague in the Jhelum District discouraged attendance at the Chca Saidan Shah and Katas Fairs in April. The number of people at both was not more than 4,000, as compared with an average attendance of nearly 35,000. The usual sanitary arrangements were supervised by the Additional Sanitary Commissioner. Only about 40,000 people attended the Pehowa Fair in Karnál District, which was spoilt by heavy rains. Special arrangements were made here to prevent infection from the wells, from which it is the custom of the people to draw sacred water. Thanks to the sanitary arrangements, not a single case of contagious or infectious disease resulted from the gathering at the "Baba Farid" Fair at Pákpattan in November. More than 60,000 pilgrims attended the "Nankana Sahib" Fair, the sanitary management of which was successfully undertaken by the Additional Deputy Sanitary Inspector.

52.—Vaccination.

Vaccination.

335. The number of vaccinations recorded in the year was 855,048 which was 2 per cent. more than the number in the previous year. In view of the extraordinary freedom of the country from small-pox, the increase from 165,378 to 185,812 in the number of re-vaccinations was remarkable. The number of primary vaccinations (669,236) was also very satisfactory, for though the actual number of such operations was less by 2,025 than in the previous year, the proportion of the children available vaccinated was greater and amounted to over 99 per cent. The district staff performed 634,527 out of the whole number of primary operations, the special staff, 28,733, cantonment vaccinators, 4,459, while 1,517 were done at dispensaries.

336. The percentage of successful re-vaccinations was 2·6 better than in the previous year, but there was a slight fall in the ratio of success obtained in primary operations, which was attributed to the effect on some of the lymph supplied of the excessive heat in certain districts.

337. There was a very considerable increase—from 8,489 to 15,049—in the number of vaccinations of infants under one year of age performed by the special staff. The disproportion between the number of males and number of females re-vaccinated continues to be pronounced, males accounting for nearly 69 per cent. of the total number of operations. It has, however, to be borne in mind that 55 per cent. of the population are males, so that the disproportion is not so great as it would appear at first sight.

338. The cost of the Department during the year was Rs. 1,40,964. The decrease of Rs. 5,983 as compared with the cost last year was due to the absence on military duty of the permanent Deputy Sanitary Commissioner.

339. The average cost of each successful vaccination was Re. 0-3-1, the decrease being due to the reason given in the paragraph above. If the proceeds (Rs. 19,607) from the sale of vaccine be deducted, the average cost falls to Re. 0-2-8 as compared with Re. 0-2-9 in the previous year.

340. There were 113,647 vaccinations in Native States which maintain their own establishment. Of these 84,645 were primary. The largest number were in Patiala, where 78,753 operations, of which 50,065 were primary, were performed during the year. The percentage of success in primary vaccinations varied between 95·83 in Jínd and 99·57 in Kapurthala, and in re-vaccinations between 33 in Faridkot and 75·47 in Bahawalpur.

Punjab Vaccine Institute, Lahore.

341. The total number of vaccinators employed in the Province was 274, and, of these, 63 attended the classes held during the year at the Vaccine Institute, Lahore, for instruction in the technique of vaccination and principles of elementary hygiene.

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The institute issued 33,894 tubes of lymph to Civil Surgeons throughout the Punjab, Native States in the Province, the North-West Frontier Province, Kashmír and a number of Military Medical Officers. In addition, it supplied 5,900 tubes to military authorities for use outside India.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this chapter will be found in the report and statistical tables noted below :—

PROVINCIAL REPORT.

Education.—(1) Report on the Progress of Education during the year 1915-16.

(2) Report on the operations of the Department of Agriculture, Punjab, for the year ending 30th June 1916.

(3) Annual Report of the Punjab Veterinary College and of Civil Veterinary Department, Punjab, for the year 1915-16.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1915-16.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistical abstract for British India, Volume I, Commercial Statistics.

53.—General system of Public Instruction.

[*Vide* pages 173-184 of the Administration Report for 1911-12.]

54.—Education.

GENERAL SUMMARY.

342. The year 1915-16 was one of development in all branches of education. The attendance in public institutions of all kinds increased by 16,204, or 1,268 more than in 1914-15, the rise in the number of middle school pupils being particularly noticeable. The total expenditure rose by nearly five *lakhs*, principally from district funds and private sources. At the same time, the effects of the war were felt in various ways. Thus the discontinuance of new recurring grants from imperial revenues and the uncertainty of the financial situation retarded the opening of primary schools by the district boards. A slackening of the rate of increase of pupils in primary schools resulted, and, in the Rawalpindi Division, where recruiting for the army was particularly brisk, there was even a decrease. Among the more favourable features of the year were the continued replacement of untrained by trained teachers and a marked advance in the number of girls attending schools. A manual training centre was started for the schools in Lahore City. A scheme of study recommended for Anglo-vernacular schools for girls, leading up to a school final examination, was drawn up by the Chief Inspectress in consultation with school authorities. Courses of lectures in hygiene, delivered by medical officers, were instituted in the various training institutions for teachers. An arrangement was made with the Young Men's Christian Association to secure the services of an expert to act as adviser to the Department in physical training. Six medical inspectors were appointed to visit secondary schools for boys and examine pupils. The number of recognised educational institutions rose by 285.

343. The total educational expenditure rose from Rs. 1,07,18,807 to Rs. 1,12,16,765. More than a third of this came from fees and private sources, less than a third from provincial revenues, and a quarter from district funds.

344. A change in the system of distributing grants to local bodies for the extension of vernacular education was introduced during the year. The variable grants formerly assessed on the basis of salary payments and other local expenditure were converted into fixed grants.

345. The total expenditure of the district boards on education rose by Rs. 3,47,949 to Rs. 27,87,274. The increase was distributed over all heads of expenditure. Deducting the portions which represent various imperial and provincial allotments, the expenditure of these bodies rose from Rs. 12,46,437 to Rs. 16,64,744, or by Rs. 4,18,307, while there was a decrease of Rs. 70,358 in the imperial and provincial share. The improvements carried out by the boards included the introduction of better scales of salaries in several districts.

346. The total expenditure of the municipal committees was Rs. 5,99,445, showing an increase of Rs. 73,673 on that of the previous year. Eliminating grants, their expenditure increased from Rs. 3,45,419 to Rs. 4,27,239. In the case of primary schools the increase was Rs. 31,749. The general tendency of these bodies is to postpone the needs of primary to those of secondary education.

347. Private enterprise continued to be manifested chiefly by religious bodies and in the field of secondary education.

Collegiate Education.

348. There was no increase in the number of Arts Colleges. The number of students in attendance rose by 379, the most noticeable increases being in the Khalsa College (105) and the Islamia College (91). These are satisfactory as indicating Sikh and Muhammadan progress in higher education. The expenditure on tuition rose by Rs. 95,663, of which provincial revenues contributed Rs. 77,226. Fee-receipts increased by Rs. 22,229, while income from private sources declined.

349. In the Government College, Lahore, the number of students increased by 33 to 584, of whom 320 were boarders. The new physics laboratory was nearly completed. The B.Sc. and M.Sc. classes in zoology and botany now constitute the University department of biology, and they are attended by students of other Colleges. Valuable research work was done by the science staff.

350. Grants amounting altogether to Rs. 21,850 were distributed by the University for building improvements, furniture, and science apparatus in five colleges; and library grants amounting to Rs. 6,000 were allotted to eight colleges.

Secondary Education (Boys).

351. The number of recognised schools increased by 25 to 404. Of the new institutions 5 were high schools, 13 Anglo-vernacular middle, and 7 vernacular middle. The number of pupils in secondary schools increased by 4,662.

352. Direct expenditure rose by Rs. 2,56,215. The increase in the case of high schools was chiefly under fees (Rs. 52,685) and provincial revenues (Rs. 43,745). In the case of Anglo-vernacular middle schools, fees, private sources, and district funds contributed most to the increase, while, in vernacular middle schools, almost the whole came from district funds. Of the total direct expenditure on secondary schools for boys, provincial revenues contribute 18 per cent. (chiefly on high schools), district funds 13 per cent. (chiefly on vernacular middle schools), municipal funds 7 per cent. (chiefly on high and middle English schools in about equal proportion), fees (chiefly in high schools) 51 per cent., the rest being met from private sources. Fees in English-teaching schools constitute 95 per cent. of the total fee-receipts. This, and the fact that the bulk of municipal and private educational expenditure is incurred on English-teaching schools, are illustrative of the growing demand for English instruction.

353. The number of teachers employed in secondary schools for Indian pupils, both boys and girls, increased during the year by about 400. Simultaneously with this general increase, the proportion of trained teachers is steadily rising.

354. In spite of the contraction of expenditure caused by the war there was a good deal of building activity.

355. Figures of recruitment which have been collected show that a considerable number of teachers and students in each division enlisted in the army: in the Rawalpindi Division alone, the number was 868 in the districts where an account was kept, in addition to 1,682 *ex*-pupils of primary schools.

Primary Schools (Boys).

356. The number of schools increased from 4,548 to 4,754. There were 102 more board schools, and 126 more aided schools; unaided schools declined by 23. Only 39 of the new board and aided schools were lower primary; it is noticeable that only 15 per cent. of the total number of primary schools for boys are of this grade, and that about 70 per cent. of the schools are maintained by Government or local bodies. Generally speaking, the people are not satisfied with anything less than an upper-primary board school. The increase of pupils was 6,288, mostly in board schools.

357. The expenditure on the maintenance of primary schools for boys was Rs. 15,07,460 against Rs. 13,57,993 in 1914-15. The bulk of this increase was in district board expenditure: fee-receipts decreased by Rs. 2,482. Nearly four-fifths of the total expenditure are borne by district funds, and the greater part of the district funds available for the purpose consists of Government grants. Thus the financing of primary education is mainly from the centre, while the control of the schools is practically local.

358. The number of trained teachers employed continues to shew a satisfactory increase. In district board primary schools (including those for girls) they constitute two-thirds of the total. With the increase of trained teachers and the strengthening of the district inspecting staff, the quality of the teaching is considered to be steadily improving.

359. A large number of primary school buildings were erected or extended during the year, particularly in the Lyallpur District, where the number of such additions was 57.

Training of Teachers.

360. There were 1,271 men and 267 women students under training in various institutions, the increase on last year's figures being 116 and 57 respectively.

361. In the Central Training College the number of applicants for admission was the largest on record, and the Principal considers that the type of applicant is improving yearly. Two hundred and forty-six students received stipends from provincial revenues. The total expenditure was Rs. 1,02,260, against Rs. 1,00,604 in the previous year. The Central Training College is hampered by over-growth of numbers; and it is difficult to refuse applicants so long as there is an active demand for trained teachers in secondary schools.

362. Two Normal Schools were added during the year. Since the close of the year a 9th Government Normal School was opened at Gurdáspur, making the number of such institutions ten altogether, training some 700 teachers for primary schools.

363. The number of local classes for vernacular teachers of lower primary classes increased from 17 to 19. Four Anglo-vernacular training classes were opened in connection with high schools. Such classes are more or less temporary expedients, the continuance of which is conditional on the supply of teachers from permanent training institutions being inadequate.

364. The number on the rolls of the Lahore Normal School for Women was 101. The training of women students was also carried on in nine local training classes attached to secondary schools: these classes,

the number of which is being added to, contained 128 students. Of 230 Indian women students being trained for the teaching profession, 84 were Christians, against 78 Hindus, 49 Muhammadans, and 17 Sikhs: it would appear, therefore, that outside the small Indian Christian community there is comparatively little readiness to take up the teacher's calling.

Professional, Technical and Industrial Education.

365. The staff of the Law College, reorganised during the year, now consists of a principal, a law lecturer, and two part-time law readers. There were 159 students on the rolls. There were changes in the staff of the Medical College due to the recall of some professors to military duty, but satisfactory arrangements were made for carrying on their work. The new main college block was opened by the Viceroy in November 1915, and also the Veterinary College. The Agricultural College, Lyallpur, is attracting a better type of students. The new vernacular class was chiefly composed of agriculturists' sons.

366. In the Mayo School of Industrial Art, Lahore, the number of students increased to 261, of whom 150 were Muhammadans. The number of students in the photo-lithography section has doubled. The cotton-printing class has also made progress. The number of industrial schools increased by 2 to 30, with 2,769 pupils. The standing committee appointed to advise on industrial education recommended that schools in which forms of manual training are combined with elementary general education should no longer be separately classed as "industrial" schools, as the name causes a misunderstanding as to their function.

Female Education (Indian).

367. Progress was well maintained in spite of adverse financial conditions. The number of institutions increased by 52 to 971 (9 high, 44 middle and 918 primary). The number of scholars rose by 4,371 to 49,367, the increase being nearly double last year's figure.

368. Nine out of 14 women candidates passed the University Intermediate examination, while 28 out of 41 were successful in the University examinations for titles or distinctions in Sanskrit, Hindi and Punjabi. The Chief Inspectress notes as regrettable the fact that most of the teaching in the secondary classes of large high schools, like the Kanya Mahavidyala and the Dev Samaj School, Ferozepore, is done by men. The vernaculars and needlework are usually well taught in the larger primary schools, and arithmetic is brought to a standard sufficient for household needs, but geography is a difficulty unless there is a trained teacher. Domestic economy is popular as a book subject but is seldom practical. Cooking, however, is practised in most secondary schools.

Education of Europeans.

369. The number of schools remained 36 as before, with 2,753 scholars on the rolls. The expenditure from all sources was Rs. 10,92,606, against Rs. 10,52,257 in the previous year. Imperial revenues contributed 15·6 per cent., provincial revenues 40·8 per cent., fees 30·6 per cent. and other sources 13 per cent. The number of teachers employed at the end of the year was 216, against 207 in 1914-15. The scale of pay has been considerably improved in recent years. Rs. 1,47,744 were spent from provincial revenues on the erection or improvement of school buildings. A signalling detachment of two masters, two staff sergeants, and fifteen boys volunteered for military service from Sanawar; most of them went to Mesopotamia. A second Sanawar detachment of one master and ten boys was sent to Siálkot for training. And ten of the students of the Sanawar Training Class for teachers, with the Master-in-charge, went on service to East Africa.

Education of Muhammadans.

370. In primary schools, the increase of Muhammadan pupils was comparatively small, and, in secondary schools, it compares unfavourably with that of Hindus. In Arts Colleges, the percentage of Muhammadan students rose from 21·3 to 21·6. There was practically no increase in the number of Muhammadans attending the Law and Medical Colleges, but their strength was more than doubled in the Agricultural College. The majority of students in the Veterinary College, the Mayo School of Art, and the various industrial schools, are Muhammadans. The total number of Muhammadan scholars in all public institutions for males was 142,187, compared with 155,252 in the case of Hindus and 46,824 in that of Sikhs. Muhammadan education is, as before, promoted by special scholarships, fee-concessions in backward district, special grants for the opening of schools in Muhammadan districts, liberal building grants for Muhammadan secondary schools, and such other means of encouragement as are feasible.

The Punjab Text-Book Committee.

371. The work of the Text-Book Committee continued to expand, and the number of meetings increased. The Committee hold the copy-right of 179 publications. During the year under review the sum of Rs. 10,620 was spent on books and periodicals for presentation to schools. The Committee distributed to district officers 560 copies of its publication "Life, Light and Cleanliness" with a view to bringing the book and its teaching to the notice of lambardars and other village officials, and also took the opportunity of disseminating information about the war by presenting to educational institutions a number of books on this subject.

55.—Literature and the Press.

Literature.

372. The total number of publications during the year has fallen from 2,221 to 1,721. This large drop of 500 is due partly to the rise in the price of paper and partly to the slackness of the printing presses, which need to be reminded of the duty of regularly supplying publications. Of the 1,721 works catalogued, 1,247 were original, 349 republications and 125 translations. Urdu with 624 again heads the list. Punjabi comes next with 571, followed as before by English. The decline is most noticeable in Urdu and Punjabi publications, but English and Hindi show a slight rise.

373. Poetry as usual claims the largest number of publications, and the volume of verse in Urdu and Punjabi is nearly as large as last year. The topics dealt with are of equal variety, but works of real merit are rare. Under Miscellaneous there is a large assortment of 452 publications on a variety of topics. The volume of religious literature is not as large as that of last year, but the subject is of popular interest and the list includes works of some merit. The controversial tendencies displayed in literature of this class have not died out, but there are signs of diminishing rancour and a calmer spirit of inquiry. In Biography lives of saints and sages and semi-divine heroes of old retain their hold on the popular imagination; the books are generally anecdotal and facts are seldom sifted from fiction. The Novel continues to be employed to expose social evils, but abler writers have begun to make use of it in connection with history. The number of historical publications—mostly for school books—has fallen considerably, but includes a few useful works. The books on Art and Travel continue to be of poor quality, and those on Science are mainly for schools and colleges.

374. All things considered, the literature of the year shows signs of advance, the most noticeable feature being that the educated classes have begun to take a larger share in its development.

The Press.

Newspapers.

375. The number of newspapers and periodicals of all kinds published in the Punjab and the North-West Frontier Province during the year under report dropped from 275, the high water mark reached last year, to 271. The figures for 1915 include 46 papers which started during the year and 74 which ceased publication during the same period. There were thus at the close of the year considerably fewer papers in existence than at its opening.

376. The number of papers published in the North-West Frontier Province was three at the beginning and three at the end of the year. Three which started during the year existed for a brief time only.

377. Of the 271 newspapers and periodicals which appeared during the whole year 177 were in Urdu, 54 in English, 26 in Gurmukhi, 12 in Hindi, 1 in English and Roman Urdu, and 1 in Urdu-Hindi. The number of daily newspapers was 23, while weekly and monthly publications numbered 80 and 131, respectively. Other papers appeared at irregular intervals. Of the 23 daily papers 6 were in English and the remaining 17 in the vernacular, 6 of the latter representing the Hindu community, 4 the Muhammadan, 3 the Sikh and 4 being neutral.

378. More than half the newspapers and periodicals, 151 in fact, were published in Lahore. Amritsar comes next with 29, followed by Simla (15), Gurdáspur District (10), Jullundur and Siálkot (8 each), Ludhiána (7), Ráwalpindi, Ferozepore, Gujránwála and Gujrát Districts (5 each) and Montgomery (3). In the North-West Frontier Province 5 papers were published in Pesháwar and 1 in Dera Ismail Khan.

Circulation.

379. So far as can be ascertained, the circulation of the more important publications was approximately as follows :—

	Copies.
English.	
Bulletin (Hindu ; daily)	3,311
Tribune (Hindu ; daily)	2,357
Panjabee (Hindu ; daily)	1,132
Observer (Muhammadan ; bi-weekly) ...	870
Khalsa Advocate (Sikh ; weekly)	866
Vernacular.	
Zamindar (Muhammadan ; daily)	12,000
Hindustan (Hindu ; weekly)	10,000
Paisa Akhbar (Muhammadan ; weekly) ...	5,760
Loyal Gazette (Sikh ; weekly)	4,000
Bulletin (Hindu ; daily)	3,504
Zamindar (Muhammadan ; weekly) ...	3,011
Himala (Hindu ; weekly)	2,927
Parkash (Hindu ; weekly)	2,327
Akhbar-i-'Am (Hindu ; weekly)	2,000
Vakil (Muhammadan ; bi-weekly)	1,880
Arya Gazette (Hindu ; weekly)	1,830
Kashmiri Magazine (Muhammadan ; weekly) ...	1,793
Watan (Muhammadan ; weekly)	1,650
Paisa Akhbar (Muhammadan ; daily) ...	1,650
Al-Munir (Muhammadan ; weekly) ...	1,332
Rajput Gazette (Hindu ; weekly)	1,256
Ahl-i-Hadis (Muhammadan ; weekly) ...	1,088
Desh (Hindu ; daily)	1,075
Khalsa Akhbar (Sikh ; weekly)	1,000
Khalsa Samachar (Sikh ; weekly)	2,857

All these Vernacular papers are in Urdu except the last which is in Gurmukhi. The *Zamindar* stopped publication during the year.

Executive action.

380. There were 212 declarations under sections 4 and 5 of Act XXV of 1867 filed during the year. Security was demanded on 28 occasions, with the result that one existing press was closed and the opening of 7 new presses prevented, while three newspapers ceased publication and nine failed to make any appearance. In one case, that of the *Punjab National Steam Press*, Lahore, security deposited was forfeited, the action resulting in the closing down of the Press.

The *Akhbar-i-'Am*, the *Nirbal Sewak*, the *Paigham-i-Sulah* and the *Zamindar* were prohibited, under the Defence of India Act, from publishing news and comments relating to the war other than those contained in Reuter's and the Secretary of State's telegrams. The last named paper was also warned at the instance of the Local Government for infringing the prohibition.

381. The following papers were formally warned for publishing articles open to objection on political grounds :—

Akhbar-i-'Am.
Al-Fazal.
Az-zia.
Bulletin (English).
Dipak.
Himala.
Hindustan.
Intikhab-i-Lajawab.
Khuda.
Panjabee.
Parkash.
Prabhat.
Sadiq-ul-Akhbar.
Shiv Shambu.
Siraj-ul-Akhbar.
Tribune,
Vakil,
Watan.

382. Warnings were administered to the papers mentioned below in connection with articles or advertisements objectionable on various grounds :—

Amrit.
Arya Musafir.
Chandar.
Dharmbir.
Himala.
Loyal Gazette
Paisa Akhbar.
Desh.
Al-Munir.
Arya Gazette.
Hakam.
Hindustan.
Kashmiri Magazine.
Khalsa Akhbar.
Medical Doctor.
Miftah-ul-Israr.
Shanti.

383. Three papers, the *Desh Upkarak*, the *Dipak*, and the *Nirbal Sewak*, failed to comply with the provisions of section 3 of Act XXV of 1867, and were called to order.

Prosecution.

384. Action under section 292 of the Indian Penal Code was taken against the *Zarif*, the *Dukh Niwaran*, the *Shahid*, the *Himala*, the *Hindustan*, the *Darwesh*, the *Vakil*, the *Desh Upkarak* (three times), the *Arya Musafir*, the *Ghalib*, the *Jhang Sial*, the *Al-Munir*, the *Rahnuma-i-Sehat* and *Talib*; and against the *Brahman Steam Press*, the *Arya Steam Press*, and the *Punjab National Steam Press*. The cases against the *Dukh Niwaran* and the *Vakil* were withdrawn on an apology being tendered. The *Desh Upkarak* was acquitted each time; Government has, however, appealed to the Chief Court against the third acquittal. There were convictions in all the cases except those of the *Desh Upkarak*.

56.—Literary Societies.

[*Vide* pages 196 and 197 of the Administration Report for the year 1911-12.]

57.—Arts and Sciences.

The Lahore Museum.

385. The number of visitors during the year was 368,164 and the average daily attendance 1,043. There was a considerable fall from 6,279

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to 5,224 in the number of female visitors on the "Zenana days." The usual course of lectures were delivered. These are becoming increasingly popular and attracted larger audiences than before.

386. The Museum acquired on loan, by purchase and by gift important additions to its collections. These included a valuable collection of Græco-Buddhist sculptures from Swat, a large number of antiquities collected by Sir Aurel Stein in Central Asia and Seistan, and several old paintings and rare Persian drawings. Three of the Museum galleries were closed to the public during the year, while new construction work and repairs were in progress.

387. The expenditure on the Museum was Rs. 11,173 as compared with Rs. 17,924 last year: Rs. 75 were realised by the sale of guide works and surplus coins.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1916 ; also in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1915-16.

58.—Archæology.

Hindu and Buddhist Monuments.

388. The expenditure of Rs. 19,712, more than twice the sum spent in 1914-15, on Hindu and Buddhist Monuments, met fully all the urgent claims for conservation during the year under report. Besides the usual annual repairs special conservation work was undertaken at the rock-cut temple, Masrur, the Baijnath temple, Manikyala Tope, and the Bhalar Tope. The repair of the last named was carried out and completed under the immediate direction of the Director-General of Archæology in India. Work at Manikyala was still in progress at the close of the period and a certain amount of underpinning as well as the clearance, levelling and draining of the surroundings of the monument remained to be done. Considerable progress was made in the excavation of the Masrur monument, practically the whole of the front being cleared to the base, and most of the original plan thus being laid bare. Its remote situation, however, and the difficulty of obtaining labour and supplies make the securing of the displaced masses of rock on the north-east a lengthy and expensive task. The special repairs to the Baijnath temple consisted principally in the removal of coats of lime plaster which concealed the original ornamentation and disfigured both the plinth and the spire. The result was reported to be very su ccessful.

389. Attention was directed to the conservation of the Kangra fort. Of the remains dating from before the occupation of the fort by Raja Sansar Chand in 1786 little remains, but the historical importance of the fort makes its site an object of peculiar interest.

390. Excavations at Taxila were continued by the Director-General of Archæology, and the archæological section of the Central Museum, Lahore, was enriched by the loan of a valuable collection of antiquities of all kinds recovered there.

391. The Honorary Numismatist to Government, Mr. R. B. Whitehead, I.C.S., reported on a find of gold coins made in the Hissar district. They numbered sixty and were part of a hoard of eighty-six coins of which twenty-six had found their way to the melting pot before the remainder were rescued. Twenty-three of the coins were of Samudragupta, the remainder of the later Kushans. The find was of special interest as Gupta coins are not usually discovered so far west.

Muhammadan and British Monuments.

392. During the year 1915-16 Rs. 22,736 were expended upon the conservation of Muhammadan and British monuments in the Punjab. Out of Rs. 12,642 spent upon maintenance and annual repairs, Rs. 10,424 were spent upon monuments.

393. Special repairs of a minor nature were also undertaken upon the Diwan-i-'Am in the Lahore fort. Some stone and marble fretwork missing from the Jharoka was replaced, a modern parapet at the rear removed, and the *chajja* secured. The raised earth in front of the

ARCHÆOLOGY.

Diwan-i-'Am was also cleared to expose again the original *chabutra*. In the Bari Khwabgah some dilapidated verandah arches were dismantled and rebuilt; while additional works were carried on in the Roman Catholic chapel, such as the provision of terracotta lattice-work in the rear openings, and the restoration of the oriel windows in the front. Rs. 1,718 were spent on improving the road front of the Shalimar garden.

394. At Jahangir's tomb, Shahdara, the works in progress in the preceding year were completed, the total cost of the improvements amounting to Rs. 12,261. Petty repairs to the supposed grave of Qutb-ud-Din Aibak in the Anarkali bazar at Lahore were carried out from funds supplied by the owner, Bakhshi Tek Chand, of Lahore.

395. At Hissar, special repairs were executed upon the *Lat-ki-Masjid* and the town wall. Useful repairs to the interesting old gateways of the ruined Mughal Sarai at Gharaunda were carried out in the Karnal district. In the Muzaffargarh district structural repairs were completed upon the tomb and mosque of Tahar Khan Nahar at Sitpur. The work secured the interesting old enamelled tile decoration, which is a notable feature of these buildings.

396. At Kotli, in Sialkot district, the Maqbara of Abdul Nabi Bhati was put into repair.

CHAPTER IX.

MISCELLANEOUS.

59.—Ecclesiastical Jurisdiction.

(For this section reference should be made to pages 201—207 of the Report for 1911-12.)

60.—Ecclesiastical.

397. During the year several chaplains were deputed to military duty with the troops in France and in Mesopotamia. A grant-in-aid of Rs. 7,000 was paid by Government for the rebuilding of the Scottish church at Simla, and another of Rs. 1,320 for additions and alterations to the church of the same denomination at Murree. Sanction was conveyed to the purchase, at a cost of Rs. 649, of articles of service for the new Garrison church at Dalhousie and for the church re-built at Dharmsala in the place of the one destroyed by the earthquake of 1905. Improvements were made in the pay of establishments attached to the cemeteries at Khanewal and Gujranwala, at an annual cost of Rs. 150; and land for the improvement of the European cemetery at Sialkot was acquired at a cost of Rs. 872.

61.—Stationery.

398. The value of stationery issued to offices was Rs. 1,14,249 and to presses Rs. 1,57,146, making a total of Rs. 2,71,395 for the year 1915-16 against Rs. 2,61,110 in the preceding year, or an advance of 4 per cent. over previous year's expenditure, although the prices of paper and stationery articles in general were normal notwithstanding the war in Europe. The value of supplies to offices was less than the allotment by Rs. 8,656 and that to the presses was less than the allotment by Rs. 17,711 resulting in a total saving of Rs. 26,367 or about 9 per cent. in the aggregate over the allotments.

62.—Punjab Government Press.

399. The income of the Government Press decreased in the year under report from Rs. 24,207 to Rs. 21,599, while the expenditure dropped by Rs. 32,827 to Rs. 2,37,440. There was a slight rise in the value of the work turned out. The sum paid for form work printed by contractors for Government was Rs. 38,943 as against Rs. 38,450 in 1914-15.

The Press Establishment was reorganised, a revised Manual of Rules was issued, and a complete stock-taking and valuation completed during the year.

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1272 CS—440—30-1-17.

PUNJAB ADMINISTRATION REPORT,
1916-17.

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Superintendent, American Baptist Mission Press, Rangoon.

REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1916-17.

Lahore:
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB.
1918.

NOTE.—The General Summary is limited to between 20 and 30 pages and the Departmental Chapters to 150 pages.

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1916-17.

PART I.

GENERAL SUMMARY.

(The " year " throughout this report is not invariably the financial year ending 31st March 1917. At the heading of each chapter, with the exception of chapter I, a reference is given to the departmental reports which contain details of the subjects dealt with. The " year " of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the " year " in chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1917, in chapter II it is the revenue year ending 30th September 1916, and in chapters III and VI it is the calendar year ending 31st December 1916.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration ; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.)

CHANGES IN THE ADMINISTRATION.

Personnel.

1. Sir Michael O'Dwyer, G.C.I.E., K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year under report.

General.

2. The appointment of Additional Secretary to Government was continued for the duration of the war, and that of third temporary Additional Judge of the Chief Court for four months of the cold weather. Two new sub-divisions of districts were constituted.

The Punjab and the war.

3. During the year 1916-17 which saw the great war well on into its third year, the Punjab continued to justify her proud title of the Sword-arm of India. Fully one half of the combatant forces of the Indian Army on the 1st January 1917 came from the Province, and this proportion has been well maintained in the great recruiting rally of the past few months. The Punjab can claim a substantial share in the arduous campaign which culminated in the capture of Baghdad thus crowning the Mesopotamian winter operations of

1916-17, and the two Victoria Crosses won by Punjabis during the year are only the most notable among numerous other distinctions gained in various theatres of the war. Nor did the people of the Province lag behind their fighting men in loyal endeavour. Contributions in money and kind in aid of the war continued to pour in, and by the end of the year more than 40 lakhs of rupees in money alone—not counting innumerable articles for the comfort of the troops—had been subscribed for the various objects mentioned in last year's report.

4. One-third of this total was contributed by the Punjab Native States, the ruling princes and chiefs vying with one another in munificent gifts from their private and public revenues. In men too, as well as in treasure, the Native States have given of their best, from the thousands put in the field by populous and wealthy Patiala to the little band of 50, under the uncle of the chief, supplied by the ancient Hill State of Suket. Of the 24,000 Imperial Service Troops in being at the commencement of 1917 no less than one-third belong to the Punjab, and the cavalry and infantry of Patiala, the infantry of Jind and Kapurthala, the camelry of Bahawalpur and the sappers of Maler Kotla, Faridkot and Sirmur, have won honour for their States and earned the gratitude of the Paramount Power.

5. In other fields also than those of war, the Province has lived up to its reputation in the present crisis. The subsidence of political unrest and the assistance rendered by the people in the suppression of crime are dealt with below, and their loyal co-operation has constituted an asset of incalculable value. Nevertheless the task of administration has been no light one. The protraction of the world-wide conflict has brought with it a multiplication of serious problems and an enormous increase in work of all kinds, while the cessation of recruitment from home and the surrender of over 200 officers of various departments for the army, have put a serious strain on the services which they have, however, borne with devotion and success.

Relations with Native States.

6. A brief reference to the splendid services of the Punjab States in connection with the war has already been given. In the sphere of internal administration the outstanding event of the year was the investiture of the young Raja of Faridkot with full powers by His Honour the Lieutenant-Governor at a formal Darbar held on the 24th November 1916. His Highness displays the closest personal interest in the conduct of the affairs of his State and shows high promise as an administrator.

7. Among other noteworthy events were the appointment of Diwan Bahadur Daya Kishen Kaul, C.I.E., as Foreign and Financial Secretary to the Maharaja of Patiala in July and the opening of the Jind-Panipat Railway in November 1916. Satisfactory reports were received of the States under minority administration, for which Government is more directly responsible. Bahawalpur continued to be well administered by its Council of Regency, the revenue settlement of Mandi was brought to a successful conclusion by the Superintendent of the State, a member of the Punjab Commission, and the term of office of the Manager of Bashahr, another member of the Commission, was extended

to November 1917 at the request of the Raja. The young chiefs of Bahawalpur, Mandi and Kalsia are making excellent progress at the Aitchison College, Lahore.

Frontier Affairs.

8. The year was a comparatively quiet one on the Dera Gházi Khan border, except for a Pathan raid in the north of the district in September 1916. The behaviour of the Baluch tribes was, on the whole, quite satisfactory. Sardar Jamal Khan, the young Chief of the important Leghari tribe, is now settling down to his duties in earnest, and during the year was invested with first class powers. The Jirga system continued to yield good results and the Chiefs' Jirga under the able presidency of the Hon'ble Nawab Sir Bahram Khan, K.C.I.E., Mazari, the *doyen* of the Tumandars, did excellent work both in district cases and in cases with the neighbouring Baluchistan agency.

Condition of the People.

9. High wages benefited the working classes, and high prices and a good autumn harvest brought prosperity to the agricultural population. In a few districts labour was scarce owing to continuous recruitment for the army, but in spite of the war, perhaps to some extent in consequence of it, the agricultural condition of the Punjab was distinctly prosperous. The year was a healthy one except in the last quarter when malaria broke out as a result of the heavy and prolonged monsoon rains, and claimed numerous victims. Cholera, however, was almost completely absent, the incidence of plague was the mildest since 1900, and the death-rate dropped by 5·6 to 30·7 *per mille* of the population. The birth-rate, 45·6 *per mille*, was 2·0 *per mille* above that of the previous year, and was the highest in India during the year and the highest in the Province for the last 14 years.

Administration of the Land.

Land revenue.

10. The re-assessment of five districts and the formation of new estates in another enhanced the fixed land revenue demand for the agricultural year ending 30th September 1916 by Rs. 13 lakhs to over Rs. 226 lakhs. Owing however to the failure of the monsoon, the collection of over Rs. 12½ lakhs had to be suspended as compared with Rs. 1½ lakhs suspended in the preceding year and an average of about Rs. 5 lakhs. Apart from this, practically the whole demand put down for collection was recovered and that without the issue of coercive processes on any abnormal scale. The fluctuating land revenue demand fell by nearly Rs. 6½ lakhs to about Rs. 122 lakhs owing to the failure of the rains and river-floods. The continued decrease of area remaining to be allotted in the canal colonies was responsible for a fall of over Rs. 3 lakhs to Rs. 38 lakhs in collections under the head "Other land revenue." The sale of Government waste lands produced Rs. 25¾ lakhs, about the same as in the previous year.

Settlements and surveys.

11. One settlement was started during the year and four were brought to a conclusion. The Survey Department carried out circuits and traverses in connection with settlement work in three districts, and in the Sutlej, Beas and Indus riverains. Topographical survey

operations were also continued in three districts and in six Punjab Native States. The Jumna inter-provincial boundary case made no progress, but the boundary of Jammu State and the Gurdaspur District was finally settled.

Land records.

12. Settlement record work was completed in two and practically completed in a third of the five districts in which it was in progress. The conduct and efficiency of patwaris was on the whole satisfactory; the block in their promotion is coming to an end and the educational qualifications of candidates are steadily improving. The closer supervision exercised over the work of kanungos is effecting a noticeable improvement.

Canal colonies.

13. Of the three old colonies, the Lower Chenab, Chunian and Lower Jhelum, the two first were finally merged in their respective districts during the year, the process of allotment having been completed. About one-tenth of the Lower Jhelum Colony remains to be distributed; here most of the grants are held on horse-breeding conditions. Of the three more recent colonies—those served by the Triple Canal System—about one-third each of the small Upper Jhelum and Upper Chenab Colonies has yet to be allotted. Good progress was made in the former during the year; in the latter the disposal of unallotted areas presents some difficulties, but revised arrangements are now being made which it is expected will secure successful colonization. In the large Lower Bari Doab colony with its million acres and more, considerably over a half has now been disposed of, and the year was one of substantial progress. More roads were built, the new town of Okara is growing steadily, plans for three new market-towns have been sanctioned and the eastern part of the colony is beginning to have a look of settled prosperity.

Wards estates.

14. The year closed with 50 estates under the management of the Court of Wards, seven having been released and three taken over. The magnitude of the responsibilities involved is indicated by the fact that the total assets of these 50 estates amount to no less than Rs. 427 lakhs. The total liabilities are only Rs. 13 lakhs and the net value of one of the estates released during the year was increased in ten years of management from Rs. 44 to Rs. 61 lakhs: these facts speak for themselves. Large sums were spent on permanent improvements and in various directions, endeavours were made to set an example of enlightened management.

Revenue and rent-paying classes.

15. Despite bad harvests, agriculturists had on the whole a good year, high prices helping to compensate for the deficiency of outturn in 1915-16. Probably as a consequence of this, and partly perhaps also owing to the increasing activities of co-operative societies, the demand for loans for land improvement continued to decline. For the first time, however, for five years, the area mortgaged exceeded the area redeemed—by about 6,000 acres. The cultivated area mortgaged was indeed slightly less than last year, but the area of cultivated land redeemed was the smallest for ten years. The average price of land continued to rise, representing 151 times the land revenue as against 144 times in the previous year, and 66 times in 1896-97: a remarkable testimony to the rise in values within the present generation. The relations

between landlord and tenant continued normal and satisfactory, and though rents are steadily rising, there is no reason to believe that tenants are being rack-rented or are unable to defend their interests. The mobility of the Punjab peasant and the high wages of labour are a sufficient safeguard against exploitation.

Legislative Council.

16. The constitution of the Council was amended by Government of India Notification No. 20, dated the 30th March 1916. The number of elected members was increased from 8 to 11, four members to be elected by Municipal and Cantonment Committees, and five by District Boards. The number of nominated members was also increased from 16 to 17. These changes were carried out in the triennial re-elections and re-nominations which took place in May and June. Two Bills—the Juvenile Smoking Bill and the District Boards Act (Amendment) Bill—were introduced during the year. The first was circulated for opinion and the second was withdrawn.

Protection.

17. The year 1916 marks the complete disappearance of the serious disorder and lawlessness of 1915, and there is good reason to believe that the administration is gaining steady success in the struggle against crime and the criminal, the result of which up to 1912 was a cause of serious anxiety. There was a remarkable decrease on the figures of 1915 in true cognizable cases dealt with by the police, while if that abnormal year be left out of account, the decline in crime in the quinquennium to the end of 1916 amounts to no less than 16 per cent. Police.

18. Numerous reasons are advanced for this general improvement in the situation, such as the subsidence of political unrest, the special measures taken to cope with wandering criminal bands and the diversion of the energies of the wilder spirits into the various spheres of military activity. Full justice should, however, be done to the increasing support and co-operation afforded by the people themselves who have been quick to appreciate Government's serious pre-occupations elsewhere and to realize their own responsibilities in assisting to maintain law and order. This attitude is well exemplified in the rapidly growing popularity of the systems of village watch and ward known as *thîkri-pahra* and *nakabandi* to the success of which is largely attributable a marked decrease in offences against property Government for its own part has not been slow in according prompt and generous recognition of valuable service in the suppression of crime : large cash rewards, grants of State lands and remissions of land revenue have undoubtedly done much to encourage the people to accept the risks which resistance to and pursuit of dangerous criminals so often involve.

19. But no increase in public confidence would have been obtained had not the police shown themselves worthy of it. Each succeeding year has displayed a notable advance in the morale of the force and throughout

the stress of the late critical times Government has been able to rely with confidence on its loyalty and efficiency. The proportion of convictions to trials shows a substantial improvement in 1916 on the average of the previous four years, indicating more thorough investigation by the police and more careful presentation of the cases before the courts. Special mention should also be made of the great success achieved in dealing with large criminal gang cases in the handling of which the police are now becoming expert, thereby dealing a serious blow to the campaign of organized crime.

20. These very satisfactory results are all the more creditable because they were gained in a period of war which has involved the service in a great deal of extra work such as the guarding of bridges, the apprehension of deserters and the provision of escorts for jail prisoners despatched to Mesopotamia. The staff also has been depleted by the loan of officers to the military authorities and the cessation of recruitment of probationers from England, there being now a shortage of 31 out of a sanctioned strength of 78 in the cadre of the Imperial Service. Considerable relief was, however, obtained by a revision and redistribution of the strength of the force in accordance with present conditions, and at the same time the large savings which resulted were utilized to effect a much-needed revision of the rates of pay of constable and head-constables.

21. The special branches of the service continued to render valuable assistance. The burden of work which fell in 1916 on the Criminal Investigation Department, if less serious than in the previous twelve months, was sufficiently heavy to keep its energies fully employed. There was no recrudescence of the lawlessness directly associated with the revolutionary movement, but the aftermath of the *Ghadr* conspiracy is to be found in the Second Supplementary Lahore Conspiracy Case, the Mandi State Supplementary Case, and the Rawalpindi Bomb Case. All these cases, as well as numerous other important investigations, were skilfully carried to conclusion by the Criminal Investigation Department, whose record of work has been of inestimable value to the peace of the Province. Very useful work was also performed by the Finger-Print Bureau at Phillaur where an extremely efficient system has been evolved with great care and deliberation. The expansion in this branch in recent years has been remarkable.

22. The year was marked by the establishment of a central agency under a special officer of the rank of Deputy Commissioner for the registration, restriction and reclamation of the criminal tribes who are responsible for so much of the crime in the rural districts of the Province. Formerly their surveillance had been spasmodic and uncoordinated owing to the want of some such supervising authority. The main features of the scheme, which was brought into operation at the beginning of 1917, are careful registration of all male members of criminal tribes, both settled and nomad, coupled with restriction to defined local areas, and the simultaneous establishment of a number of reformatory, industrial and agricultural settlements. It is hoped that

its eventual results will be to convert many thousands of debased hereditary criminals into law-abiding and self-respecting citizens. The success attained even in the short time that elapsed before the close of the year under report was remarkable.

Criminal Justice.

23. The decrease in crime mentioned above is indicated in a reduction of 14 per cent. in 1916 in the number of cases of the four more serious classes—offences affecting life, robbery and dacoity, theft and the receiving of stolen property. The total of murders exhibits a small increase on the preceding year's aggregate but is slightly below the average of the previous four years. There was also a small rise in the number of matrimonial offences. The number had progressively declined since 1912, and it is to be hoped that the set-back is no more than temporary and is only due, as has been suggested, to the absence of so many young men on active service. The serious feature of this class of crime is its intimate connection with the traffic in women which in recent years has been a scandal in certain tracts, while probably in 40 per cent. of the murders committed in the Punjab the originating cause is matrimonial infidelity or irregular sexual relations.

24. Though there was, as the Police reports show, a real decrease in recorded crime in 1916, the total number of cases admitted by the courts was larger even than in 1915, no less than 269,401 persons, or nearly 1·4 per cent. of the total population, being brought to trial. These statistics are, however, no true index of the criminality of the Province, as of the accused brought to trial only 26 per cent. were ultimately convicted, and it is clear that a great proportion of the cases should have been dismissed at the outset. Nevertheless the number of complaints dismissed summarily and the number of cases struck off as false again dropped, as also did the number of cases in which compensation was awarded to persons falsely accused. The approaching amendment of the Criminal Procedure Code will, it is to be hoped, improve the procedure in this respect. At the same time there can be little doubt that the present unsatisfactory state of affairs is mainly due to the constitutional indolence or timidity of a section of the subordinate magistracy, both honorary and stipendiary, and for this the increased attention now being paid to the inspection of subordinate courts, should provide a remedy.

Prisons.

25. There was a slight decrease in 1916 on the record jail population of the preceding year, but the daily average of persons confined was still very largely in excess of the total accommodation provided, and the construction of another central jail is the only real solution of the problem. There is however no actual overcrowding as the excess prisoners are accommodated in tents and workshops. The vital statistics of a year in which malaria was very prevalent were quite satisfactory; there was a considerable decrease in the daily average sick-rate and the mortality fell from 25 to 20 *per mille* which compares favourably with the death-rate of 30 *per mille* among the free population. The number of escapes was small, and on the whole the standard of discipline and conduct was well maintained.

26. The chief feature of the year, however, was the valuable contribution made by the jails towards the national effort in the prosecution of the war. Volunteers among the jail population between the ages of 18 and 41 who had not been convicted of the more serious offences were invited to enlist for service in labour, porter and sweeper corps in Mesopotamia on specified conditions which included conditional release from the date of embarkation. The response was eager and a sweeper corps of 391 men was sent to Mesopotamia in June, followed by a porter corps of 872 and a labour corps of 1,179 in October, all these corps being kept up to strength by subsequent drafts. In addition to this supply of personnel the jails undertook the manufacture on a large scale of blankets, tents, nose-bags and other articles for the military authorities.

Civil Justice.

27. The most satisfactory feature of the report on the administration of Civil Justice during the year 1916 was the decline of more than 2 per cent. in the total number of civil suits instituted. A poor autumn harvest in 1915 was followed by an almost complete failure of the winter rains and a spring crop much below average. Except in the canal-irrigated districts the cultivator had therefore little, if any, surplus with which to re-pay his money-lender, and the natural result was a substantial decrease in the number of suits by creditors for the recovery of their debts. Heavy recruiting also tended to diminish the volume of litigation; with so large a proportion of their manhood absent on active service, those remaining on the land had less leisure for resort to the courts, and litigation is generally regarded by the Punjab peasant as a luxury to be enjoyed when work is slack and the purse full.

28. The decline in the number of institutions does not, however, mean that there was less work for the courts. It was only in the simplest class of cases, those for money or moveable property, that there was a falling off. More difficult suits slightly increased in number, and the average value of all suits, usually a fairly accurate index of their complexity and of the time required for their decision, was a shade above that of 1915. The average duration, 78 days for contested and 38 for uncontested suits, though almost exactly the same as in 1915, has risen considerably of late years and is far too high. The increasing numerical strength of the Bar and the multiplication of unofficial law reports are no doubt largely responsible, and measures are being taken to deal with the latter. But failure to check irrelevant and undue prolixity in counsel's arguments and disregard of the rules of procedure laid down in the Code are also contributing causes; there are indications that these defects are somewhat common among the lower grades of the civil judiciary and the attention of inspecting Judges is being specially directed to their eradication.

29. More than two-fifths of the total number of suits instituted in 1916 did not exceed Rs. 50 in value. It is true that the number of these petty disputes has for some time past been steadily declining, but they still occupy a disproportionate amount of the time of the regular courts, both original and appellate, and the provision of a cheap, accessible and expeditious agency for their settlement is an urgent problem.

Much was hoped from the Punjab Panchayat Act, which was tentatively introduced in ten districts some two or three years ago. But after every effort to make it a success the Act in its present form has unfortunately proved a failure: the procedure which it provides is slow and cumbrous, it is doubtful whether many of the disputes settled under it would ever have come into the regular courts, and the question of its repeal or radical amendment is now under consideration.

Registration.

30. Registration business recovered very largely during the year from the slight set-back it received in 1915 and the Registration Report dealing with the triennium 1914 to 1916, discloses a remarkable expansion in the business done. Compulsory registrations of immoveable property, by far the largest and most important branch of registration work, exhibit an increase of 11 per cent. in number and 16 per cent. in value on the figures of the preceding three years, compulsorily registered mortgages increasing by 12 per cent. in number and 17½ per cent. in value, and sales from 25,000 in number in 1911 to 28,000 in 1915 and to close on 30,000, with the record aggregate value of Rs. 314 lakhs, in 1916. These figures bear witness to the steady growth in the amount of capital available for investment in land, and the consequent rise in land values, which have taken place in recent years. The reason is no doubt partly to be found in the check given to industrial and commercial activity by the bank failures of 1913; on the other hand the increasing popularity of immoveable property as a field for investment shows how little the material prosperity of the Province has been affected by the war, and is a remarkable proof of the general confidence in the stability of existing institutions.

Local Self-Government.

District Boards.

31. The rural attitude towards elections is still one of diffidence and distrust, probably owing largely to the foreign and novel character of the machinery of voting register and ballot box: were the will of the people to find expression by way of popular discussion and acclamation—as in the earlier stages of local self-government in Europe—there is little doubt that considerably greater interest would be displayed. Nevertheless the right men are frequently chosen, and the general working of the boards continues good. Members, however, have to be carefully nursed; discussion has to be kept within their mental horizon and definite tasks set them which fall within the range of their experience. Within these limits there has been undoubted progress, and much also is hoped from the devolution of financial responsibilities mentioned in last year's report. But there is little chance of real development with the meagre and inelastic resources which most boards have at present, and in raising their local rate to the statutory limit – small enough though that be—several more boards have taken a step in the right direction.

32. The gross income of the boards was Rs. 78¾ lakhs, of which nearly half was obtained from the local rate and a third from Government contributions. Some of the ground lost last year has been regained, and there has been an increase of 47 per cent. in the quinquennium; but the income of most boards is still far too low to permit of anything more than a hand-to-mouth financial existence.

33. The boards devote much of their attention, and about a third of their income, to education; and under the guidance of the Education department a regular and well-considered policy in the location of primary schools is now being pursued. Medical relief does not fare so well: the expenditure on this during the year was only a third of that spent on education and in the case of many boards was quite inadequate. The whole of the receipts under this head only amounted to just over a lakh of rupees and boards still seem unable to get over their dislike of charging fees from the well-to-do.

Municipalities.

34. The general attitude of the municipal voter towards elections is much that of his rural *confrère*, except on the occasions when personal or sectarian feeling gives rise to keen contests—with their far too frequent accompaniments of bribery and corruption. Some improvement may be effected by the rules and model bye-laws which Government has recently issued; but the success of the elective system must primarily depend on a healthy public opinion in such matters—unhappily a plant of slow growth in the East.

35. Committees are on the whole discharging their duties satisfactorily, though members are somewhat too prone to shirk important problems. They also too often endeavour to keep control of petty executive matters in their own hands: a tendency frequently resulting in jealousy of the executive officers of the committee. In many cases also their general attitude towards municipal questions leaves room for improvement, and it is only in the larger towns with their broader outlook and higher standard of education, that members are gradually acquiring that appreciation of public duty without which urban self-government is impossible.

36. The total income of municipalities for the year was Rs. 82 lakhs: an increase, excluding Government grants (Rs. 7⅓ lakhs this year), of 10 per cent. in the quinquennium. More than half these receipts were the proceeds of taxation, and of the latter, octroi contributed the record amount of Rs. 40 lakhs, or 88 per cent. The substitution of a terminal tax, however, continues to gain ground, and legislation is under consideration which should materially facilitate that desirable end.

37. Committees showed themselves on the whole fully alive to their responsibilities in the matters of education and medical relief, though like district boards they still have an unconquerable aversion to collecting fees for medical attendance from those who can well afford to pay. In the majority of municipalities there has been no serious attempt to deal with overcrowding, or with the food and milk supply; at the same time the number of large schemes of public improvement in hand or under consideration indicates that committees are beginning to appreciate the need for better conditions and to take practical steps to realize them.

Agriculture, Weather and Crops.

The Lyallpur Agricultural College.

38. Agriculture in India suffered a heavy loss by the death of Mr. J. H. Barnes, late Principal of the Lyallpur Agricultural College, not long after his transfer to Pusa as Imperial Agricultural Chemist in February 1917. Mr. Barnes' large and enterprising outlook, wide knowledge

and indefatigable energy promised great results of which a part had already been realized in the rehabilitation of the Agricultural College, and in the initiation of enquiries of vast potential importance to agriculture. Largely as a result of his personality and efforts the Lyallpur College after several years of vicissitudes is now firmly established in popular esteem. The Indian public has realized not only that the College can lead to an honourable and well paid career but also that the possibilities of improved agricultural methods in the Punjab are not small. The College classes are consequently filled to over-flowing and its graduates are in ever greater request as managers of estates.

Work of the Department of Agriculture.

39. The Department is securing in a growing degree the confidence of the agricultural population. Its activities in the year under report were increasingly varied and extensive, and a great future is anticipated for it. The experiments and demonstrations in implements and methods at the Lyallpur and Gurdáspur farms, and the demonstrations at fairs and on private farms throughout the country are producing noticeably excellent results, while the success of the department in popularizing well-established varieties of seeds is evidenced by a quadruple increase in the area under American 4-F cotton and Punjab 11 wheat. Attention is also now being paid to the important question of the transport and marketing of agricultural produce, and the first steps were taken in connection with cotton: representatives of the great cotton exporting firms and Indian growers and dealers were consulted, and measures were considered to prevent adulteration by producers and to secure an adequate price for Punjab American cotton in the wholesale market.

40. A notable feature of the year's work was the successful completion of the experiment in reclamation of saline land at Narwála which marks a definite stage in the solution of a problem of enormous importance to Punjab agriculture. A scheme for the reclamation on similar lines of a very large area on the Lower Bari Doab Canal is under consideration, and though experts are not altogether unanimous as to the prospects of success, Government will not be deterred by the risk of failure from making an experiment which will cost a few lakhs of rupees, but which if successful on a large scale will add some millions sterling to the capital wealth of the Province.

Veterinary and Livestock.

41. The year was marked by excessive monsoon rains which were as unhealthy for cattle as for human beings, and there were many outbreaks of contagious disease. Surra and dourine among equines and rinderpest and hæmorrhagic septicæmia among bovines were particularly prevalent, the Dourine Act having eventually to be extended to the whole Province. The Civil Veterinary Department with its staff 25 per cent. below strength had a ha d task but did all that was possible to cope with the epidemics.

42. The year was a successful one for the Punjab Veterinary College at Lahore. The number of students admitted was larger than in the previous year and the results of the examinations were very creditable to the Principal and his staff. There was again a considerable increase in the number of in-patients treated in the hospital attached to the College; but the number of out-patients continued to decrease, probably owing to the distance of the building from the city:

a second municipal hospital will however, it is hoped, soon come into existence to meet this need.

Fisheries.

43. Fishing regulations have now worked satisfactorily in two districts for over a year, and an extension of the law to four others is contemplated. The Kapúrthala State has also come into line, and will probably introduce some rules framed by the Department. Good sport has been obtained in Kulu since the trout-fishing was opened to the public last year; the trout nurseries there were very successful and fresh nurseries have also been started in the Mandi and Chamba States.

Co-operative Societies.

44. The year 1916-17 was again one of consolidation rather than expansion for the co-operative movement. There was no marked change in the number of societies or in the amount of capital invested in them, but progress in the improvement of existing societies was nonetheless real, and their generally flourishing condition in spite of the abnormal financial conditions created by the war is evidence that they are working on sound lines. Practically all societies were subjected to systematic inspections and the majority classified as good, fair, poor or bad. The thorough nature of this scrutiny is shown by the fact that no less than 12,000 members of agricultural societies, who had no real interest in the movement, were expelled, and a number of unsuccessful societies wound up, a process which cannot but have a strengthening and invigorating effect upon co-operation as a whole.

45. Much was done during the year to improve the status of societies: the valuable concession mentioned in last year's report, whereby the provincial finances bear the cost of three-quarters of the commission paid on money-orders despatched from one society to another, received the sanction of the Government of India, and new rules were issued under section 43 (1) of Act II of 1912, the important innovations being that primary societies may pay a cash dividend of not more than ten per cent. in their twelfth and following years, and that the awards of arbitrators shall be enforced by a civil court as a decree of the court. A second officer of the Indian Civil Service was placed on special duty under the Registrar of Co-operative Societies in January 1917, and the number of Government Inspectors was raised to nineteen. At the same time the Sub-Inspectors formerly paid by Government were discharged and re-employed by societies.

Rainfall.

46. The monsoon of 1916 was unusually active and widespread and was followed in the beginning of October by heavy rains which were most favourable for the sowing of spring crops. The winter rains, however, commenced late and were very deficient, the season being in fact one of the driest on record, and the canal supply was seriously affected. But good rain in April 1917 helped the wheat crop of the Northern Punjab though some damage was done in the East and South-East where much of the crop had been cut.

Crops and prices.

47. The harvests of 1916-17 were on the whole a great improvement on those of the preceding year. Owing to the excellent rains, the sown and matured areas in the autumn harvest of 1916 were well above normal and fell little short of the record. In the following spring harvest, however, the shortage of winter rains brought the matured area down just

below normal, though sowings had been good. This and large exports raised the price of wheat slightly. Increased export was also responsible for a rise in the price of cotton; but other crops cheapened as compared with the previous year, though prices of course still remained affected by the war.

FORESTS.

48. There was a slight decrease from just over to just under Rs. 17 lakhs in the Forest income, and an increase of nearly half-a-lakh to Rs. 9½ lakhs in expenditure. Thus the year was financially somewhat less successful than its predecessor. It represents, however, a marked improvement on the average of the previous three years: the reduction in income was very largely due to the gradual completion of tree clearance in areas coming under colonization in the central and south-western districts; and there is every reason to believe that the revenues of the department will steadily expand as the irrigated plantations in the plains mature, and the hill forests are more scientifically exploited.

49. That increased exploitation will be a crying need in the near future there can be no doubt: the war has greatly stimulated the demand for timber and it is practically certain that after the conclusion of peace, Indian railways will require large quantities of wood for conversion into sleepers. The resources of the Punjab are however quite capable of meeting the increased demand; but to do so, they must be exploited to greater advantage than they are at present. There are large areas now under the charge of the Buildings and Roads and Irrigation Departments which with expert management might be made to yield much more in the way of fuel and timber; while in the hill forests expert opinion now generally takes the view that departmental management would produce a better return than the present system of leasing extensive areas to private contractors. It is clear, however, that the department is far too undermanned to undertake these wider activities and the necessity for a largely increased staff has been recognized. A scheme for the re-organization of the superior cadre has therefore been approved by the Secretary of State: it will be introduced gradually as financial conditions permit and officers with the necessary qualifications become available; and provision has already been made in the budget for 1918-19 for a second Conservator with his clerical and ministerial establishment.

50. Meanwhile despite a sadly depleted staff (seven out of fifteen officers of the Imperial Service have been on leave or deputation, including three on military duty), and a specially heavy burden of work arising from urgent demands for timber by the military authorities, the department can be congratulated on a successful year. Good progress was made with the various working-plans and forest-settlements in course of completion, and a marked decrease in the number of forest offences and forest fires demonstrates the steady improvement in the relations between the people and the department. There was also a large increase in the output of resin and turpentine from the department's factory at Jallo; the quality has been pronounced fit for the European market, and the profits for the year largely

exceeded the cost of the factory. This resin industry is an excellent instance of departmental enterprise: it is perhaps the most successful industrial concern of recent years in the Punjab, and it may play a large part in the future development of the Province.

TRADE AND MANUFACTURES.

Industries.

51. The Punjab is one of the great salt-producing provinces of India, and the output rose from 144,000 tons in 1915-16 to 160,000 tons. Coal and oil are the only other minerals found in any appreciable quantity, but their outturn is small and decreased still further during the year.

52. The total number of operatives in factories—32,000—was again a record. Nearly 40 per cent. of these were employed in the big Railway and Canal workshops where the staffs were greatly increased to cope with large munitions and other war orders. Half the remainder were in the numerous cotton ginning and pressing factories of the province, which had a successful year as a result of the good cotton crop. Some progress was made in the improvement of ventilation and lighting in factories, the fencing of dangerous machinery and the provision of means of escape from fire; but Indian employers are still far too indifferent to the welfare of their work-people, permitting, if not encouraging, squalid and insanitary housing, the sweating of women and children and a disregard of the weekly holiday and the daily rest interval.

Rail and river-borne trade.

53. The balance of trade, which was badly upset in the first year of the war, recovered somewhat in the second year, and still more in the year under report, there being a further fall in the volume of imports, accompanied by a large rise in that of exports. The total volume of trade is still less than before the war, but owing to high prices the value has practically regained its previous level. The war and shortage of freights were responsible for decreased imports from overseas, such as of cotton piece-goods, and metal girders and sheets, while good harvests lessened the demand for sugar and food-grains from outside the province. The largest increases in exports were in wheat, fodder and raw cotton, of all of which the local harvests were good. Imports of gold and silver bullion decreased owing to high prices but there was a large increase in the import of silver coin on account of the continued prohibition of the issue of gold from Government Treasuries.

Trans-Frontier Trade.

54. The Punjab carries on a small trade with Southern and Western Afghánistán, Central Asia, and Western Tibet, by certain recognized frontier routes provided with registration stations. The registered Afghánistán trade, which is exclusive of rail-borne trade, is of a minute nature, and amounted during the year to not much more than a lakh of rupees in value: a small quantity of leather, cotton piece-goods and husked rice is exported in exchange for fruit, vegetables and nuts. The total value of the Central Asian trade fell by two lakhs to twenty-two lakhs of rupees. The principal exports are manufactured silk, Indian tea, and cotton piece-goods, in exchange for raw silk and wool and charas, Yárkand being the sole source of the provincial supply of the latter drug. There was a slight increase in the trade with Western Tibet. The Punjab imported about Rs. 6 lakhs

worth, mainly of raw wool, with some borax, salt and hides, and exported about half-a-lakh of rupees worth of cotton piece-goods, Indian tea, and brass and copper utensils.

Joint Stock Companies.

55. The report on Joint Stock Companies in the Punjab for the year 1916-17 does not make encouraging reading. There are only 78 active companies in a province with a population (British territory) of some 20 millions. The amount of paid-up capital indeed increased by nearly Rs. 72¾ lakhs; but this was due to the activities of an important firm of English bankers: indigenous companies continue to disappear rapidly, and, except for a few under sound control, most of those that remain do not appear to understand the elementary principles of joint-stock enterprise, or to appreciate the necessity for the safeguards and restrictions provided by the law.

Public Works.

56. The financial restrictions imposed by the war continued to narrow the activities of the Public Works Department during the year. The expenditure of the Buildings and Roads Branch, which had been Rs. 83 lakhs in 1914-15 and Rs. 68 lakhs in the following year, fell to Rs. 49 lakhs in 1916-17, and the progressive rise in prices of imported articles and frequently the impossibility of obtaining them at all, seriously hampered the execution even of sanctioned projects. The staff of the Department also suffered further depletion: out of a sanctioned and actual strength of 43 officers on the Imperial establishment, only 25 were on duty at the end of the year, and no less than 80 per cent. of the European officers of fighting age are either on active service or engaged in war work of some kind.

57. Despite these difficulties the year shows a good record of work accomplished. Many town drainage schemes were on hand or were completed, and numerous buildings were erected for different branches of the administration. In the important sphere of communications there was a steady improvement in the main roads under the Department's charge, though the shortage of wagons on the North-Western Railway considerably impeded the carriage of stone ballast which is being rendered increasingly necessary by the gradual depletion of the local deposits of *kankar*. Progress was also made with the new road-bridge into the United Provinces over the river Jumna.

58 The improvement of the capital of the Punjab continued apace. The surroundings of the King Edward Memorial group of hospital buildings were cleared of unsightly and insanitary shanties and cab-stands, the various tombs and temples in the vicinity were repaired and their precincts planted with grass and trees, and the scheme was completed by the erection of the fine Ewing Hall Hostel, opened by the Lieutenant-Governor on the 8th November 1916. The result is an architectural group and setting of which any city might be proud.

Irrigation.

59. The year 1916-17 is marked as the first complete year of working of all three canals of the Triple Project noticed in last year's report, and by the closing of their construction accounts with an expenditure of

over 10 crores of rupees. One million acres were irrigated during the year by these three canals, as against the million-and-a-half estimated; but the delay of one year in the completion of the Upper Jhelum Canal, on which the working of the other two depends, was responsible for this, and it is hoped that a few years more will see the forecast fully realized.

60. The expansion of irrigation attained was however very considerable, and with the abundant monsoon rainfall of the summer and autumn of 1916, resulted in an increase during the year of nearly three-quarters of a million acres in the total area irrigated by the Punjab Canals, and of 4½ crores of rupees in the estimated value of the crops raised, the total of the former amounting to 9½ million acres and of the latter to 32 crores of rupees. Of the irrigated area, 8 million acres received their water from perennial and 1½ millions from inundation canals, and there were over 4,000 miles of main and branch canals, and nearly 15,000 miles of distributaries in operation at the end of the year.

61. This expansion of irrigation is reflected in an increase from 2½ to nearly 3 crores of rupees in the direct receipts of the department; the gross receipts were the highest on record; and with a further reduction in expenditure, the net profits, which in 1915-16 were just on 11 per cent. excluding, and 7½ per cent. including, interest charges, rose in 1916-17 to nearly 13 per cent. and 10 per cent., respectively, on a total capital outlay up to date on the main canals of the Province, of over 22 crores of rupees.

62. But the Punjab irrigation department is still seeking new fields to conquer and several important projects are under examination. Among the most noteworthy are (1) a barrage on the river Jhelum at its exit from the Woolar lake in Kashmír, (2) a scheme for the fuller and more efficient use of the waters of the Sutlej river below its confluence with the Beas (this project is estimated to cost just on 10 crores of rupees and bring in a net profit of 9·8 per cent.), (3) an enormous dam at Bhakra, high up on the Sutlej, to impound water for the irrigation of about one-and-a-half million acres, and (4) a canal from the Indus at the southern end of its Salt Range gorge, to irrigate about two million acres of the Sind Sagar Doab desert.

Railways.

63. With the exception of a railway from Jind to Panipat, 43 miles long, no new lines were opened during the year and the total mileage of railways of all classes at the end of the year remained unaltered.

Revenue and Expenditure.

General.

64. The revenue raised in the Province in 1916-17 amounted to Rs. 1,028 lakhs or Rs. 130 lakhs more than in the previous year, the Provincial share being Rs. 517 lakhs, a rise of Rs. 29 lakhs. The largest increases were of Rs. 49 lakhs under Salt (a purely Imperial head), and Rs. 50½ lakhs under Irrigation—Major Works, the latter being due to the extension of irrigation from the Triple Canal system. Other noteworthy increases were under Excise and Opium (Rs. 6½ lakhs), Income-tax (Rs. 6 lakhs), Miscellaneous (Rs. 5¾ lakhs) and Land Revenue (Rs. 5½ lakhs). There was no decrease of any importance.

65. The total expenditure for the year was Rs. 589 lakhs, or Rs. 23 lakhs less than in 1915-16. The Provincial share was Rs. 458¾ lakhs, as against Rs. 477 lakhs in the preceding year. The chief decrease was one of Rs. 17 lakhs under Civil Works and was mainly due to war-time restrictions on expenditure. Other decreases were of Rs. 4⅓ lakhs under Medical (owing to the departure of officers on military service), Rs. 2½ lakhs under each of Law and Justice—Courts of Law and Irrigation—Major Works, and over Rs. 2 lakhs under Land Revenue. The only important increase occurred under Famine Relief where expenditure rose by Rs. 4 lakhs owing to fodder concessions. The close of the year saw the Provincial balance increased from Rs. 63½ lakhs at the end of 1915-16 to Rs. 122⅓ lakhs.

Excise.

66. The large concentration of troops in the Province and its neighbourhood and the prohibitive prices of imported liquor were responsible for a considerable increase in 1916-17 in the proceeds of the duty on Indian-made beer and foreign spirit. The liquor revenue reached the record figure of Rs. 50½ lakhs, and with the usual income from opium and other drugs raised the total excise revenue to Rs. 75¾ lakhs, an increase of 8 per cent. on the revenue of the preceding year.

67. Except, however, in the case of beer, which is mostly consumed by British troops, there was no marked increase in the normal consumption of liquor. A little more country spirit was indeed drunk than in 1915-16 when for temporary reasons the consumption had fallen unusually low; but 7 per cent. less was drunk than in 1914-15, and nearly 15 per cent. less than in 1913-14. There is every reason to be satisfied with this progress: it is no doubt largely due to the increase in the duty, but in part also to the efforts made for some time past to discourage intemperance by the closing down of shops, the discontinuance of fair licenses and other similar measures. The dangers of too sudden a reduction in facilities for licit drink have, however, not been lost sight of, and an energetic campaign has in recent years been carried on against illicit distillation: a very fair degree of success is being obtained, and perhaps the most encouraging sign is the increased assistance given by village headmen and their growing sense of their responsibilities in this direction.

68. The opium revenue of just over Rs. 16½ lakhs was slightly larger than in 1915-16, despite restrictions placed on the issue of excise opium in order to check smuggling. Excise opium fetches very high prices in Burma and smuggling, especially through the Native States, is so profitable that a widely ramified organization has grown up to defeat the law. A special bureau is however at work, much valuable knowledge of the illicit traffic has been acquired and the whole question is receiving consideration. There was a rise in the consumption of charas which is being met by increased taxation. Sales of cocaine fell by nearly half owing to high prices and a reduction in imports.

Stamps.

69. Receipts under the Court-fees and Stamp Acts, Rs. 59⅘ lakhs, exhibited an increase of a lakh and a half which was fairly evenly divided between Judicial and non-Judicial Stamps. The increase in the former is mainly attributed to good harvests which enabled peasants to redeem their land and money-lenders to recover their debts, and also to

enhancements in the conventional value of land made at recent revenue settlements. The increase in receipts from non-Judicial Stamps, which was assisted by the absorption of two smaller banks by the Alliance Bank of Simla, is the natural result of the rising value of urban property and the various other manifestations of provincial development.

Income-tax.

70. The enhanced rates of assessment introduced by the new Act came into force on April 1st, 1916, and the result was apparent in an increase in the final demand by 51 per cent. to Rs. 23 lakhs. The general growth of prosperity and the success of the special assessing agency mentioned in the last report also contributed to this result. These figures are however no guide to the commercial wealth of the province as most of the big exporting firms, a large proportion of whose profits accrue in the Punjab, have their principal places of business or residence elsewhere. The group system of assessment referred to last year has only met with moderate success: the tendency is to over-assess the poor and to favour the rich, and the panchayats as a rule have failed to obtain the confidence of tradesmen.

Vital Statistics.

Birth and death rate.

71. The year 1916 was on the whole a healthy one and the vital statistics of the province were consequently more satisfactory than they have been for some time past. The birth-rate of 45·6 *per mille* of the population is 2 *per mille* higher than that of the previous year and is with two exceptions the highest ever recorded in the Punjab. The total number of births registered was 881,546. Deaths numbered 593,670 or 30·7 *per mille* of the population. This rate is 5·6 less than that for 1915, and 1·0 less than the average of the preceding quinquennium. The general death-rate in towns was higher than that in rural areas but exhibited greater variations. The last quarter of the year, which is the malarial season, was as usual the unhealthiest, and the first few months the healthiest. On the whole prices of food-grains ruled high during the year.

Public health.

72. Had it not been for the prevalence of malaria due to unusually heavy monsoon rains, the vital statistics for 1916 would have been even more satisfactory than they were. Cholera and plague were almost completely absent: the former accounted for only 1,651 deaths as compared with 13,196 in 1915, while the visitation of plague was the mildest ever experienced in the province. For 3 weeks in July 1916 the whole Punjab was declared free of plague for the first time for 20 years: there were only 4,151 deaths as compared with 244,104 in 1915, and the worst-infected districts were those which were left with a legacy of the disease from the previous year. Unfortunately malaria was more prevalent, for the reason given above. It never became really epidemic on any large scale, but its extent is indicated in the increase of 32 per cent. in the number of deaths recorded as due to fevers, as compared with the figures of the previous year. Everything possible was done to cope with the outbreak: on the first sign of the occurrence of cases, itinerating dispensaries were sent to all known malarious tracts and a liberal supply of quinine was provided throughout the Province.

Sanitation.

73. The usual grants were made to local bodies for urban and rural sanitation and a large number of drainage and water-supply schemes received the approval of the Sanitary Board and the sanction of Government. Attempts to enlist the co-operation of the people and to improve village sanitation have however met with little real success. Sites near villages are invariably in a filthy condition, and manure and dung are stacked in the vicinity of dwelling houses and drinking wells. An epidemic of cholera or plague or the visit of a touring officer will often effect a temporary improvement, but very soon afterwards matters revert to their normal condition. The usual number of large fairs was held during the year, and thanks to the arrangements made by the officers of Government, they were unattended by any outbreak of disease.

Medical Relief.

Dispensaries.

74. War conditions continued to hamper the provision of additional facilities for medical relief, the net increase during the year in the number of dispensaries being only 5. The number open at the end of the year was 478, and is quite inadequate for the needs of the Province: it is estimated that nearly one hundred more are required to provide even one dispensary for every 35,000 persons. The income of the department increased by over half a lakh to nearly Rs. 16½ lakhs, but would stand at a much higher figure if local bodies insisted on the payment of fees by the well-to-do. Expenditure rose from Rs. 14 lakhs to just over Rs. 15 lakhs.

Diseases and patients.

75. There was again a small increase in the number of in-patients treated; the number of out-patients rose by over a quarter of a million to nearly five millions, owing mainly to the outbreak of malaria referred to above. The number of major operations performed continued to increase, while the death-rate among patients operated on remained at its previous low figure.

Treatment of women.

76. There was a slight increase in the number of women treated. Much, however, remains to be done, particularly by way of augmenting the supply and improving the quality of women workers. The new Punjab Medical School for Women at Ludhiána has not hitherto attracted the number of non-Christian girls hoped for; but a scheme for the provincialization of the female Sub-Assistant Surgeons' service and the improvement of their prospects is under consideration, as also are proposals for the constitution of a Central Midwives' Board, and the establishment of a Midwives' Central Training School at Amritsar.

General.

77. The needs of the war continued to deplete the ranks of the department, and during the year a large number of Assistant and Sub-Assistant Surgeons were deputed for military duty. Over 200 dressers were also trained and supplied for service with the army and 330 beds at different hospitals were reserved for sick and wounded soldiers from overseas. The Punjab Medical Registration Act, with its far-reaching effect on the profession in the Province, was placed on the Statute Book in March 1916.

EDUCATION.

78. Remarkable progress is disclosed in the current report of the Director of Public Instruction dealing with the quinquennium ending 1916-17. The annual expenditure on education has risen from Rs. 69 lakhs to Rs. 109 lakhs, the number of students from 381,000 to 477,000 and of institutions from 7,400 to 9,400. Many new buildings have been erected, the number of trained teachers has almost doubled and there has been a distinct improvement in their pay and prospects. On the other hand during the last two years the rate of progress has been retarded by the war: Imperial grants have been reduced; the scheme for the construction of a second Government College outside Lahore has been in abeyance; and the project for a second Training College at Jullundur has had to be postponed.

79. Collegiate education has also undergone a remarkable extension during the same period. The number of students in the ten Arts Colleges for men increased from 2,462 to 4,221, the annual recurring expenditure rose by 78 per cent. to Rs. 6½ lakhs, and altogether nearly Rs. 6½ lakhs were spent on new college buildings. Great importance has also been attached to fostering the corporate and social life of the colleges and more than half the students reside in hostels or controlled premises.

80. While the problem of finding employment for the graduates of the Arts Colleges is beginning to merit serious consideration, no such difficulty arises in the case of the professional colleges and technical institutions. The advantages offered by these have obtained ready recognition from the practical-minded Punjabi, and the demand for graduates from the Medical, Veterinary, Agricultural and Central Training Colleges and from the Rasul Engineering School, the Mayo School of Art and the Victoria Diamond Jubilee Hindu Technical Institute, greatly exceeds the supply. At some—notably the Agricultural College and the Central Training College—numbers have to be refused admission for lack of accommodation, but much has been done in the last five years with the funds available, and the new buildings opened by Lord Hardinge in 1915 for the Medical and Veterinary Colleges in Lahore are among the largest and best-equipped of their kind in India.

81. The profession of teaching can at last be said to command a fair chance in the market. Local bodies are beginning to realize the vital importance of well-paid and well-trained masters, the rates of pay have been almost universally improved, and a correspondingly higher standard of attainments is now required. The percentage of trained teachers in secondary schools has risen from 54 to 65 and in primary schools from 41 to 52 in the past five years. The number of normal schools has consequently been doubled in order to meet the increased demand, training classes have been opened at various centres to supply local and immediate needs, and the applicants for admission to the Lahore Central Training College so far exceed the accommodation available that it has been decided to open a second college at Jullundur—a project only postponed owing to the war.

82. The number of primary schools for boys has risen in the quinquennium from 3,417 with 179,410 pupils, to 4,913 with 245,628 pupils; and there is now a school for every seven villages, as compared with one for every ten in 1911-12. The progress of secondary education has been no less satisfactory. Expenditure has risen by 75 per cent. from Rs. 16 lakhs to Rs. 28 lakhs annually, and the number of schools and pupils by 33 and 36 per cent. respectively. The quality of teaching has improved hand in hand with the quality of teachers, and increasing attention is also being paid to the physical and moral welfare of the boys. The problem of suiting the curriculum of primary schools to the needs of rural life, and of avoiding the examination fetish in secondary schools is receiving the consideration it deserves.

83. The record of the secondary schools of the Province in connection with the war is one of which they may well be proud and proves that among the martial classes the younger generation has inherited to the full the traditions of their forefathers. In the Rawálpindi Division alone nearly a thousand teachers and pupils have enlisted in the army, and some of the teachers have shown themselves enthusiastic recruiters. Considerable contributions have been made to various funds, pupils in many cases foregoing their prizes so that the money might be sent to the Red Cross or the Comforts Fund for troops in the field.

84. Noteworthy progress has been made in the education of Indian women: the number of institutions for girls has risen since 1911-12 from 669 to 990, and of scholars from 33,260 to 51,496, while the number of women under training for the teaching profession has increased five-fold. The Christian Missions, the Arya Samaj, the Khalsa Diwan and the Dev Samaj have done notable pioneer work towards breaking down ancient prejudice; Indian public opinion is now more favourable, and education is beginning to be valued by parents as tending to improve the prospects of their daughters in after life.

85. Of the various communities in the Province, the Muhammadans are still the least advanced in proportion to their numbers. They are well represented in the Agricultural and Veterinary Colleges, the Mayo School of Art and the Industrial schools; but in every other branch of education they fall far behind the Hindus and Sikhs. The main cause of this comparative stagnation is the relative poverty of Muhammadans which renders it necessary for them to make an early start in life. The remedies hitherto employed, such as the remission of fees and the establishment of special scholarships, have not been particularly efficacious. Various other suggestions are made in the Director's report but the most promising signs are the steady increase in the number of Islamic institutions and the liberality which the Muslim gentry display towards the education of their co-religionists.

86. There are 34 European public schools in the Province, four of which are directly managed by Government, the total number of scholars being 2,890. The Lawrence Military Asylum at Sanawar and the Lawrence School, Ghora Gali, are distinguished for their general efficiency, the *esprit de corps* of their scholars and the lofty sense of duty exhibited by their Principals and staffs. The schools are, however, suffering at present from a dearth of teachers for which the claims of

the army are responsible, but the general efficiency is nevertheless well maintained.

Literature and the Press.

87. There is little to remark regarding the literature of the year. The output of books and periodicals slightly increased, despite the shortage of paper; but there were few works of any particular merit, and the general literary standard was not high. Religious publications and inferior poetry predominated as usual. The former on the whole displayed an improvement in style, but were in some cases marred by objectionable attacks on rival creeds.

88. There was a further slight fall to 261 in the number, and 270,000 in the circulation, of newspapers and periodicals published during the year; the decrease in circulation being attributed to the increased cost of paper and printing materials. The conduct of the press showed on the whole a marked improvement on the previous year. There were fewer cases of demand of security under the Press Act of 1910 and considerably fewer warnings for publication of articles objectionable on political or other grounds, while there was only one prosecution under section 292 of the Indian Penal Code, as against 19 the year before.

NOTE.—The General Summary is limited to between 20 and 30 pages and the Departmental Chapters to 150 pages.

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1917-18.

PART I.

GENERAL SUMMARY.

(The " year " throughout this report is not invariably the financial year ending 31st March 1918. At the heading of each chapter, with the exception of chapter I, a referenee is given to the departmental reports which contain details of the subject dealt with. The " year " of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general it may be said that the " year " in chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1918, in chapter II it is the revenue year ending 30th September 1917, and in chapters III and VI it is the calendar year ending 31st December 1917.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration ; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.)

Lieutenant-Governor :

SIR M. F. O'DWYER, G.C.I.E., K.C.S.I.

The War.

1. In a Province which has always been noted for its martial traditions the war naturally continued throughout the year to form the most serious pre-occupation of the administration. In July 1917, in response to the call for a more effective organization of the man-power and resources of India, a Provincial Recruiting Board was formed, consisting of a number of experienced Civil and Military officers and non-officials, all of whom had practical experience of the problems with which they were called upon to deal. The Lieutenant-Governor, who had been appointed a member of the Central Recruiting Board himself, assumed the presidentship of the Provincial Board which met regularly until the cessation of hostilities, and rendered the greatest assistance to Government in all matters connected with recruiting. A vigorous campaign was initiated in all districts with a view to attracting to the Army classes of military value, and a series of Recruiting Darbars was held by the Lieutenant-Governor at which the apathetic were aroused to their duty and the active were stimulated to further effort by

commendation and the judicious distribution of rewards in the form of land, khillats, titles and other distinctions. That the policy thus pursued has been amply justified by results may be gathered from the figures quoted by the Lieutenant-Governor in his speech to the Provincial Legislative Council in April 1918 when he recalled to the members the resolution which the Council had passed soon after the outbreak of war humbly assuring the King-Emperor of the determination of the people of the Province to serve His Majesty in every form in which their help might be required against the enemies of the Empire. Whereas during the first 2½ years of the war the Punjab furnished 124,000 men to the Indian Army, during the year 1917-18 it raised over 127,000 to fight the battles of the Empire. All the rest of India, including the Native States, with more than 12 times the Province's population, raised in the same period 137,000. In addition to these combatants, some 60,000 or 70,000 Panjabis were enlisted as non-combatants, followers, &c.

2. How well the soldiers of the Province have borne themselves in the field has been proved by the fact that they won up to April 1918 not less than 1,448 distinctions for gallantry in the field including 3 Victoria Crosses and 18 Military Crosses besides 126 Foreign Orders and Medals. In these honours the troops of the Ruling Princes and Chiefs of Patiala, Jind, Bahawalpur, Kapurthala, Faridkot, Maler Kotla and Chamba, who came forward with practical and generous offers, usually to double their existing contributions of fighting men, had their full share; and it was with peculiar pride and pleasure that the people of the Province learned of the selection of His Highness the Maharaja of Patiala to represent the Princes of India in the Imperial War Conference. The honour was welcomed as a just recognition of the part played by the premier Punjab State and the Punjab generally in the great conflict.

3. It cannot be disguised that the burden of sacrifice has been unevenly distributed among the people. The 2½ lakhs of combatants have been drawn almost exclusively, and the 60,000 non-combatants mainly, from the rural agricultural classes. The urban population of the Province which forms one-tenth of its whole population has not borne a share proportionate to its obligations, and even the attempt to recruit from its classes a battalion 1,000 strong for purely local service in the Indian Defence Force failed, only 150 fit men in all being enrolled.

4. As regards the organization of resources the Province subscribed nearly six crores (£ 4 millions) to the First Indian War Loan—a total exceeded only by the wealthy Presidencies of Bombay and Bengal. Apart from the supply of animals and materials for the auxiliary services of the Army, the Province also contributed liberally to the various War and Relief Funds, the amount raised on the 12th December 1917 for "Our Day" alone having reached about 17 lakhs (£ 113,000).

5. The further depletion of the cadres of various departments in order to meet the military demand for officers intensified the strain on the administration, but fortunately there was no recrudescence of internal political trouble. A diminished stream of emigrants returning from America and the Far East reached the Province; but, thanks

to the arrangements for the surveillance and control of suspicious or dangerous characters, no trouble was experienced in dealing with these men. Indeed, it was found possible to relax restrictions placed on numbers who had learned their lesson; and 73 men who had been interned in jail under the Ingress into India Ordinance were released, while 637 more were freed from minor restrictions. The number left in jail at the close of the year was 29 only of the more desperate and stubborn seditionaries, while about 710 others are prohibited under the Ingress Ordinance and the Defence of India Act from leaving the villages in which they reside.

Security.

6. The peace of the frontier in the Dera Ghazi Khan District was temporarily disturbed in the spring of 1918 by the insurrection of the Marris, a Baluch tribe in the Baluchistan Agency. The only incident in this outbreak which directly affected this Province was a raid made on the small hill station of Fort Munro and the adjoining police station of Khar by a force of Khetrans and Marris. The raid was repulsed and the military punitive expedition into the raiders' country promptly ended the trouble.

7. Internally, the Province has cause to congratulate itself on the continuance of the remarkable decline in crime to which attention was drawn last year. The total number of cases of all kinds reported shows a decrease of 28 per cent. as compared with the year 1912 when crime in the Province reached its high water-mark. The various causes, some temporary and others, it is hoped, permanent, which have contributed to this decrease, were discussed in last year's report, and need not be set out again in detail. It is, however, worthy of reiteration that the growing success of the Police in the struggle with crime and the criminal could never have been attained if the administration had not succeeded in enlisting the co-operation and active assistance of the public in the measures for their protection. One of the most effective forms of popular support has been the system of voluntary village patrols which has now been legalised so as to enable it to be enforced in case of need. Its statutory recognition will assist in maintaining the independence of village communities and at the same time furnish those responsible for internal security with a valuable weapon to be used when occasion requires. The hands of the administration have further been strengthened by the passing of the Habitual Offenders Act by which the movements of bad characters can be restricted.

8. Crime is also being attacked by means of the reformative treatment of the potential or actual criminal. A notable instance of this is the scheme for the registration, restriction and reclamation of the criminal tribes of the Province. Reference was made last year to the establishment of a central agency under a special officer of the rank of Deputy Commissioner for this purpose. The first annual report of the new department is an inspiring record of one of the most important experiments in social reform hitherto undertaken in the Punjab. Registration and classification of the adult males of such tribes have now been completed, the worst characters have been placed in or passed through a Reformatory Settlement at Amritsar, less unruly characters have been drafted with their families to industrial or agricultural settlements, and others, constituting the large majority, are merely kept

under certain restrictions within their own villages or police stations and subjected to supervision with a view to ensuring that they are kept out of mischief and have sufficient employment. The best men are exempted from all restrictions and their names struck off the register. At the end of 1917 there were 418 inmates in the reformatory, 1,223 in the agricultural and 2,840 in the industrial settlements.

9. One very encouraging feature of the work in these settlements is the response by philanthropic societies and business firms to the desire of Government to secure the co-operation of the people in the work of reformation. Organisations representing all the four great religions of the Province—Muhammadan, Christian, Sikh and Hindu—have come forward to undertake the management of one or more settlements.

10. The organised effort to bring these outcasts from society, whose members—men, women and children—are estimated at from 125,000 to 150,000 souls, within the pale of civilisation has commenced under favourable auspices, and its results are already traceable in diminished returns of crime.

11. Another interesting experiment in reformation which continues to make good progress is the treatment of adolescent criminals by "Borstal" methods, *i.e.*, by training and discipline in confinement followed by conditional release before the completion of their term of sentence of selected prisoners to approved individuals or societies. A Bill is under consideration to permit of the scope of this scheme being greatly extended.

Condition of the People.

12. The health of the year was influenced adversely by the exceptional meteorological conditions. An active and early monsoon, which set in at the beginning of June, continued till late in October. As a result of this, a severe epidemic of malarial fever spread over the Province from September 1917 onwards, causing a heavy death rate. The general birth rate—43·3 *per mille*—though slightly less than that of the preceding year, exceeded the average of the previous five years by 1 *per mille*. The death rate—37·9 *per mille*—exceeded that of the preceding year by 7·2 *per mille* and the average of the previous quinquennium by 6·7. The malarial epidemic contributed mainly to this unsatisfactory result.

13. The material prosperity of the agricultural population maintained its former level. The spring harvest of 1918 was excellent, the prices of agricultural produce were high and the continuous recruitment for the army provided a wide field of employment and an expanding source of income. Trading and commercial classes generally benefited from high prices while those with fixed incomes suffered correspondingly. Wage-earners were more than compensated for high prices by high wages, the demand for labour of all kinds having been unusually keen.

14. The Province being essentially agricultural, the condition of the agricultural population is the best index of general prosperity, and it is therefore satisfactory to record that the collections of land revenue practically equalled the demand, while the number of coercive processes issued was 25 per cent. less than in the previous year. The value of agricultural land also continues to appreciate and now averages Rs. 227 per acre, which represents 157 years' purchase of the land revenue assessment of the land sold. Last year the price represented 151 times

the land revenue as compared with 66 times 20 years ago. No better proof could be afforded of the leniency of the land revenue demand and of the remarkable increase of general prosperity within the last generation.

15. An indication of increased prosperity among other classes is furnished by the income-tax collections which amounted to 34 per cent. more than in the previous year, though this result is to some extent due to improved methods of assessment consequent on the employment of a special assessing staff.

Finance.

16. The conditions outlined above more than justified the favourable financial estimate of the year which had been framed. The opening balance was 59 lakhs greater than in 1916-17, the revenue exceeded the revenue of that year by 32 lakhs and expenditure declined by nearly 20 lakhs. The year closed with a balance of 194 lakhs. The causes of the decrease in expenditure were the necessity for rigid economy, the saving under salaries owing to the employment of so many officers in the army, the difficulty of obtaining materials and the consequent compulsory postponement of schemes, and the absence of any substantial expenditure under the famine relief head. Nearly all the main heads of revenue show an improvement, the only decrease being under "Irrigation," as the heavy monsoon of 1917 rendered the spring harvest of 1918 to some extent independent of canal irrigation.

Agriculture and Rural Economics.

17. The monsoon of 1917 was a very heavy one, and caused some damage to autumn crops, the outturn of which except cane and rice was poor, but left the land moist for the sowing of the spring crop. The spring harvest was a good one and the estimated outturns of the principal crops largely exceeded the normal.

18. The high prices obtained for agricultural produce and the generally prosperous condition of the agriculturist have already been referred to. A larger prosperity, however, awaits him when he can be persuaded to adopt more scientific methods and, during the year, the Agricultural Department has continued its efforts in this direction both by experiment, demonstration and propaganda. A useful advance is the provision of small demonstration plots which are being started in Gurdaspur and Montgomery to be worked through co-operative credit societies by the zamindars themselves under the guidance of the agricultural assistant of the district. The interest taken by district boards in agriculture is increasing year by year and many agricultural associations have been formed and demonstration farms started.

19. Progress in the sale of improved implements and in well-boring has been hampered by the restrictions caused by the war, but the success of the department in leading the zamindars to use better seed is well illustrated by the facts that the area under 4-F. American cotton has risen from 215,000 to 390,000 acres, and that under pure "Punjab-11" wheat has more than doubled.

20. In connection with the maintenance and improvement of live-stock it is gratifying to note that there are now over a thousand stud bulls at work in the Province. The number of animals treated at veterinary hospitals was more than double the average of ten years ago, the increase being evidence of the growing popularity of the Veterinary Department.

Co-operative Credit.

21. Though the Co-operative Credit movement is discussed separately, as the activities of the Department extend also to the formation of industrial and urban societies, yet it is essentially a part of rural economics. Primarily, the Department aims at the removal of the burden of debt from the shoulders of the zamindar, and, secondly, it works in concert with the Agricultural Department for the improvement of agriculture. Great progress has been made in this respect during the year ; ten of the staff underwent a six months' training in practical agriculture at the Lyallpur College and numerous visits were paid by members of the staff to the farms at Lyallpur and Gurdaspur, each visitor receiving a week's training. The societies have also sold large numbers of improved agricultural implements and large quantities of first class seed obtained from the Agricultural Department. A number of cotton-sale societies have also been formed for the growth of pure American cotton, and for its sale by co-operative agency.

22. The year has been generally one of expansion and experiment. A new Central Bank has been formed, agricultural societies have increased by over five hundred, industrial societies, though hampered by war conditions, have made steady progress, and eight agricultural supply societies have been started. The ordinary credit societies have also begun to supply members with seed, salt, oil, etc.

23. What may prove to be a landmark in the development of the movement is the foundation of the Punjab Co-operative Union, Limited, a combination of all the Central Banks and Banking Unions which elect representatives in proportion to the number of primary Societies affiliated to them.

Trade and Industry.

24. There are only 191 factories in the province. The total number of operatives employed is approximately 32,000. The most common types of factories are naturally those connected with agriculture, such as cotton-ginning, oil-pressing and wheat-grinding. The internal trade returns for the year (*i.e.*, the returns mainly relating to exports to and imports from other parts of India) show a decrease in the volume of imports but an increase in their value. This is due to war conditions and has been apparent ever since the war commenced. Exports, on the other hand, have not been adversely affected by the war, and both as regards volume and value the year under report compares favourably with the pre-war period. The increased export of grains, particularly of wheat, as compared with the previous year, was especially notable.

25. The external trade returns (*i.e.*, those relating to trans-frontier trade with Afghanistan, Central Asia and Tibet) show a general increase of trade except in that with Tibet which has slightly decreased in value. The increase in the export trade to Afghanistan and Central Asia is notable, and in the latter case at all events is in part due to the dislocation of Russian trade.

Local Self-Government.

26. Local self-government on western lines is a plant of slow growth in the Punjab and the indifference and ignorance of the electors and the frequent absence of a true civic spirit in the elected constitute the most serious obstacles to its progress and also to the wider constitutional changes which are now in contemplation. In municipal administration new rules have been passed during the year which provide among other matters for

simultaneous elections, and it is hoped that these may help to effect some cure for the present apathy by presenting voters through the medium of a general election with an opportunity for a comprehensive review of important questions of municipal administration and teaching them to test the merits of candidates by their attitude towards such questions. Out of the 100 municipalities of the Province, 14 have non-official chairmen, and the work done by these gentlemen and by others as Vice-Presidents and Honorary Secretaries is such as to justify hopes of the early expansion of this important development of local self-government which the Local Government is most anxious to encourage. With a view to the introduction of similar developments in district boards, the opinion of non-official members of these boards was tested, but was found to be almost unanimous in desiring the continuation of the present system of official chairmen.

27. During the year an Act (IV of 1918) was passed providing facilities for the imposition of a terminal tax in municipalities in the Punjab, the intention being that this form of taxation should gradually replace the cumbersome octroi system.

28. In district board finance, only five districts now remain in which the maximum local rate is not imposed, and with expanding needs, many of the boards are faced with the alternatives of new forms of taxation or the more systematic exploitation of existing resources. Increased attention is being paid to education, medical relief, arboriculture and to agricultural farms.

29. On the whole there has been progress in local self-government.

Education.

30. The keynote of the remarks made last year on education was the expansion of the department during the previous quinquennium. Progress has again to be recorded except in the number of pupils attending primary schools which shows a slight and temporary decrease due to special causes. The present year has been remarkable rather for the wide survey made of educational methods and for the plans made and decisions formed for co-ordinating and directing the course of efforts for future expansion.

31. The most notable event was the introduction of a Compulsory Education Bill. It is premature to make any pronouncement on this Bill which is still before the Legislative Council, but the proposal paved the way for the appointment of a committee on District Board educational finance which met in October 1917 ; the orders passed as a result of its recommendations mark a great step forward in the improvement of rural education and for the creation by local bodies with substantial Government aid of the conditions which are essential before the principle of compulsion can be accepted. The scheme for the expansion and improvement of vernacular education has now taken shape and the aims of Government are declared to be the establishment of District Board schools at every centre where an average attendance of not less than 50 children may be expected, while a provisional two-mile limit between schools is intended to avoid overlapping. It has also been decided to have a five-year programme of expansion prepared on the basis of the financial capacity of each District Board. The ultimate recurring cost of the five-year programme when carried out will be about 12 lakhs of rupees, out of which Government will provide about two-thirds as well as large sums on non-recurring expenditure.

32. Another important decision arrived at by a conference held in April was that the vernacular medium should be adopted for instruction in the middle departments of Anglo-Vernacular schools for all subjects, except English. The results of this change, which marks a definite break with the past, will need to be carefully watched, especially in view of the fact that in a recent report of the Egyptian department of education a deterioration in the knowledge of English has been ascribed to the substitution of Arabic for English as the medium of instruction in secondary schools in that country.

33. To provide trained teachers and to attract men of suitable standing to the teaching profession is one of the problems of education in India, for the demand constantly tends to outstrip the supply. It is satisfactory to note that as a result of measures (such as the making of grants dependent on the provision of a satisfactory scale of salaries for teachers) which have steadily been pursued for improving pay and prospects, the quality of the candidates is steadily improving. The proportion of trained teachers in both secondary and primary schools is also increasing, though it is still only 53 per cent.

34. No new normal school for men was opened during the year, but sanction has been accorded to the opening of an additional normal school at Lahore and also of four normal schools for women at centres outside the capital, so as to provide one for each division of the Province. A proposal for a large increase in the staff of the Central Training College at Lahore is under consideration. The popular tendency to regard mere literacy as the end and object of education is gradually being eradicated, and there is a growing and healthy demand for scientific, industrial, commercial and agricultural training. The Agricultural College at Lyallpur, the School of Engineering at Rasul, the Veterinary and Medical Colleges and Mayo School of Arts at Lahore and the Clerical and Commercial Classes at Amritsar have all made solid progress, and a proposal for the institution of a Diploma for Commerce is under consideration. In fact, the professional and technical institutions generally cannot keep pace with the demand for qualified graduates. One new Arts College—the Guru Nanak Khalsa College at Gujranwala—was opened. How far the Punjab will ever develop industrially is for the future to decide, but, with the increasing interest shown in scientific agriculture and in the transport and marketing of produce, there is an undoubted opening for industries, such as sugar refining and cloth manufacture, which are connected with agriculture. A healthy sign of the times in this connection is the increased stress which is being laid on the provision of some agricultural training in schools and arrangements have now been introduced for putting teachers through a practical course of agriculture at the Lyallpur College which should pave the way for making the teaching of agriculture in secondary schools more thorough.

35. In female education little progress has to be recorded, the number of pupils showing but a small net increase. This is probably due to a great extent to the lack of trained teachers which will, it is hoped, soon be remedied by the provision of the normal schools referred to above. The increased interest of women in medical work is indicated by a satisfactory rise in the number of pupils at the Ludhiana Medical School for Women.

PART II.

DEPARTMENTAL CHAPTERS.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Surveys and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 59—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

1. There was no change in the office of Lieutenant-Governor, Sir Michael O'Dwyer, G.C.I.E., K.C.S.I., remaining the head of the Province throughout the year under report.

2. The success of the arrangements made in previous years for the systematic inspection of Judicial Courts justified the re-appointment of a 3rd temporary Additional Judge in the Chief Court for 6 months in the cold weather of 1917-18.

8.—Relations with Tributary States and Frontier Affairs.

I.—PHULKIAN STATES.

3. Mr. L. M. Crump, I.C.S., held charge of the Agency throughout the year. The Post of Personal Assistant remained vacant.

PATIALA.

Area, 5,412 square miles; population, 1,407,659; approximate revenue, Rs. 110 lakhs; army and police, 5,557; Major-General Maharaja Sir Bhupendra Singh, G.C.I.E., G.B.E., Sidhu Jat; aged 27; has a male heir; salute, 19 guns (including 2 personal).

Personal.

4. His Highness the Maharaja enjoyed good health throughout the year under report except for two attacks of influenza. He attended the Lahore Darbar in April, the Chiefs' Conference at Delhi in November as well as the Select Committee which met at Bikaner and Alwar, and finally at Patiala in January 1918. His Highness was appointed a Member of the Central Recruiting Board and attended several of the meetings at Simla and Delhi. He was one of the Ruling Princes and Chiefs invited to Delhi to meet His Excellency the Viceroy and the Right Hon'ble the Secretary of State for India in February 1918. During the year, His Highness and his successors were exempted from presenting *nazars* in Viceregal Darbars. For services in connection with

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the war the Maharaja's salute was raised by the addition of two guns (personal) on the 1st January 1918, and he was also appointed a G.B.E.

The War.

5. The State continued to contribute generously in men and money, etc., and the total amount of aid in money from the commencement of the war up to the end of the year was reported by the Darbar to be Rs. 25,39,000. The total number of recruits supplied direct by the Patiala State to the Indian Army and enlisted at the Divisional Recruiting centre from the commencement of the war up to the end of April 1918 is 12,531 or 1·58 per cent. of the total male population. Besides this the casualties occurring in the State Forces or Corps in the field or in India have all along been supplied by reinforcements from the State Depôt, and recruiting for the Imperial Service Troops on active service has been constantly in progress; and the grand total of recruits is 19,183, or 2·42 per cent. of the total male population. In response to the Premier's message to India His Highness the Maharaja offered to raise three new battalions for the Indian Army. The pay of the men and officers in the State Army has been raised to stimulate recruiting and also to encourage the rank and file already in service.

Crops and Irrigation.

6. The autumn harvest of 1917 was seriously damaged by excessive rainfall but the succeeding spring harvest was good. No new irrigation projects were begun or under construction. The irrigation system is now fully developed and there are no openings for future expansion except in the way of small improvements and re-adjustments.

Public Health

7. The birth rate for the year (36·2 *per mille*) was less than that of the previous year and the death rate (30·39 *per mille*) showed an increase, this being due to epidemics of fever and plague.

JIND.

Area, 1,259 square miles; population, 271,728; approximate revenue, Rs. 24 lakhs; army and police, 1,815; Lieutenant-Colonel Maharaja Sir Ranbir Singh, G.C.I.E., K.C.S.I., Sidhu Jat; aged 39; has no male heir; salute 15 guns (including 2 personal).

Personal.

8. His Highness enjoyed excellent health. He lived almost the whole year in the State except for a short visit to Lahore in April 1917 on the occasion of the Viceregal Darbar and for a shooting excursion to the Central Provinces. No important change took place in the administration of the State. In recognition of his eminent services during the war an increase of two guns (permanent) and two (personal) has been made in His Highness' salute and he has also been granted the Honorary rank of Lieutenant-Colonel and the hereditary title of Rajendra Bahadur.

The War.

9. The war expenses of the State during the year amounted to more than 8 lakhs (including 3½ lakhs invested in the Indian War Loan), making a total war expenditure since the commencement of the war of over 26 lakhs. The Maharaja offered all the camels in Charkhi Dadri District free of charge to Government and 140 were selected.

10. The number of recruits directly supplied to the Indian Army by the Jind Darbar or enlisted by recruiting parties in the State territory from 1st June 1917 to 31st March 1918 was 2,234 which, added to the previous aggregate, gives a total of 6,144, or 4·09 per cent. of the total male population. If 1,137 men enlisted in the Jind Imperial Service Regiment be taken into account the grand total comes to 7,281, or 4·85 per cent. of the total male population. The figures are remarkable and the Darbar may well be proud of them. During the year under report a double company was added to the strength of the Jind Imperial Service Regiment for the duration of the war. The regiment returned to Sangrur after 3¼ years' active and arduous service in East Africa where their work earned the high commendation of the General Officer Commanding, and the Darbar received congratulatory messages from His Excellency the Viceroy and the Lieutenant-Governor. The regiment has earned in all 38 distinctions in the field including one C.I.E. and a Military Cross. The Chief Minister of the State, Sardar Bahadur Sardar Shamsher Singh, was honoured with a K.C.I.E. in recognition of his war services.

11. Exceptionally heavy rains seriously damaged the autumn crops, but the spring crop was on the whole normal. Of the total land revenue demand for the year all but a small amount was collected. **Crops.**

12. Although malaria assumed an epidemic form there were 12,405 births as compared with 6,639 deaths in the State during the year. **Public Health.**

NABHA.

Area, 928 square miles; population, 248,887; approximate revenue, Rs. 19½ lakhs; army and police, 1,532; Maharaja Ripudaman Singh, Sidhu Jat; aged 35; has no male heir; salute 11 guns.

13. His Highness the Maharaja enjoyed good health during the year. He visited Simla in the summer and attended the Chiefs' Conference held at Delhi in the autumn of 1917. **Personal.**

14. The strength of the Imperial Service Troops is about 600. At the close of the year arrangements were being made for the employment of this force in the field. Other war offers made by the Maharaja were accepted. **The War.**

15. The outturn of crops was fair and few suspensions of land revenue had to be granted. **Crops.**

16. The State enjoyed immunity from plague and cholera and the numbers of births and deaths were 4,454 and 2,406, respectively. **Public Health.**

II.—STATES OF THE BAHAWALPUR AGENCY.

17. Mr. W. C. Renouf, I.C.S., held charge of the Agency during the year.

BAHAWALPUR.

Area, 15,000 square miles; population, 780,641; approximate revenue, Rs. 41 lakhs; army and police, 2,068; Nawab Sadiq Muhammad Khan, Abbasi, V, Daudputra; aged 13; salute 17 guns.

18. His Highness the Nawab has enjoyed generally good health throughout the year, and his progress at the Aitchison College continues to be satisfactory. The State is successfully administered by the Council of Regency and received a visit from the Lieutenant-Governor in February 1918. **Personal**

19. The Imperial Service Camel Corps has rendered valuable war service. Over 800 Imperial service camels together with officers and men were employed in two frontier operations and on both occasions the State troops received high praise for their work. The Camel Escort, which has been employed in Egypt with the Alwar Infantry, was mentioned for good work at the battle of Gaza. Despite the absence of all tradition of Military service the Darbar has endeavoured to co-operate in recruiting measures and over 1,000 recruits had been supplied by 31st March 1918. Rupees 40 and 11 lakhs were invested by the Darbar and the people of the State respectively in the first War Loan and war contributions to various funds amounted to Rs. 40,000, apart from Rs. 69,400 subscribed by the State and the people towards "Our Day." **The War.**

MALER KOTLA.

Area, 167 square miles; population, 71,144; approximate revenue, Rs. 14 lakhs; army and police, 1,026; Major Nawab Sir Muhammad Ahmad Ali, Khan Bahadur, K.C.S.I., Pathan; aged 37; has a male heir; salute 11 guns.

20. The health of His Highness the Nawab remained good throughout the year. During the summer he visited Mashobra and Simla. His Highness' third son died in May 1917 of enteric fever. **Personal.**

21. The 1st Company of the State Sappers continues to do excellent work in Mesopotamia and is, like the 2nd Company at head-quarters, over strength. Several honours have been earned by officers and men at the front, and His Highness continues to evince a keen interest in his troops. Every assistance is rendered to the Government recruiting **The War.**

officers. Donations to various war funds amounted to Rs. 13,410, and Rs. 10,750 were subscribed by State subjects towards Post Office Cash Certificates.

Public Health. 22. The numbers of births and deaths registered during the year were 852 and 466, respectively, as compared with 893 and 347 in the previous year. The increase in the number of deaths is chiefly due to malarial fever and small-pox.

FARIDKOT.

Area, 642 square miles; population, 130,294; approximate revenue, Rs. 13½ lakhs; army and police, 371; Major Maharaja Brij Indar Singh, Barar Bans, Jat; aged 21; has a male heir; salute, 11 guns.

Personal. 23. In recognition of his eminent war services His Highness was granted the personal title of Maharaja and was made an Honorary Major in the British Army. It has, however, to be recorded with profound regret that this very promising young Chief died after the close of the year under report in December 1918.

The War. 24. The Imperial Service Troops continued to render valuable services in East Africa up to February 1918, when they returned to the State after an absence of three years. The General Officer Commanding, East Africa, sent an appreciative message in regard to their work which was duly communicated to the Darbar together with the congratulations of Their Excellencies the Viceroy and Commander-in-Chief and His Honour the Lieutenant-Governor.

25. Recruitment is progressing fairly well in the State both for the Imperial Service Troops and for the Indian Army.

26. A sum of 6¼ lakhs was subscribed by the State and one of 5¼ lakhs by the people to the War Loan and the State has also contributed over one lakh to various war funds.

Public Health. 27. There were 4,205 births and 2,600 deaths registered as compared with 4,712 births and 2,636 deaths in the preceding year. The health of the people was generally good.

III.—STATES OF THE JULLUNDUR DIVISION.

KAPURTHALA.

Area, 630 square miles; population, 268,133; approximate revenue, Rs. 31 lakhs (inclusive of about Rs. 16 lakhs income from Oudh States); army and police, 2,416; Lieutenant-Colonel Maharaja Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahluwalia Sikh; aged 45; has a male heir; salute, 15 guns (including 2 personal); tribute, Rs. 1,31,000.

Personal. 28. His Highness the Maharaja spent the year in the State except for a visit to Kashmir for the hot weather. The State was efficiently administered under his personal supervision. For services in connection with the war the Maharaja's permanent salute was raised on 1st January 1918 to 13 guns, and his personal salute to 15 guns. He was also granted the rank of Honorary Lieutenant-Colonel in His Majesty's Army.

The War. 29. During the year the strength of the Depôt of the Imperial Service Regiment was nearly doubled, an auxiliary force of 200 men was raised and over 2,000 recruits were furnished for the Indian Army, and a sum of Rs. 2,50,000 was invested in the Indian War Loan. Rs. 13,773 (including the subscriptions of State officials and subjects) was contributed to "Our Day" Fund.

Public Health. 30. The State after being nearly free from plague in 1916-17 suffered a fresh visitation causing 1,093 cases and 677 deaths. There were also 9 cases and 5 deaths from cholera in the year.

MANDI.

Area, 1,200 square miles; population, 181,110; approximate revenue, Rs. 7 lakhs; army and police 360; Raja Jogendra Sen, Rajput Mandal; minor; salute, 11 guns; tribute, Rs. 1 lakh.

Personal. 31. His Highness the Raja is reported to have made good progress at the Aitchison College.

32. The number of recruits furnished by the State to the Indian Army was 373 as compared with 111 in the previous year.

33. The Darbar invested Rs. 1½ lakhs in the War Loan and also converted nearly Rs. 2 lakhs of Government securities. In addition over Rs. 63,000 worth of Post Office Cash Certificates were purchased in the State. **The War.**

34. A comprehensive report received from the Superintendent on the year's administration discloses a record of steady progress. Tahsil buildings are being constructed at the head-quarters of the outlying tahsils and the revenue and police establishments have been re-organized. The result of the land revenue settlement completed at a cost of Rs. 2,35,000 has been to enhance the revenues of the State by Rs. 81,000, after making full allowance for the cost of the abolition of various imposts, a substantial rise in the pay of a number of State servants and the establishment of a proper system of village officers The reforms introduced should confer great advantages both on the State and on the people in this hitherto backward hill tract. The re-organized forest administration was very successful, showing a profit of nearly Rs. 40,000 on the year's working The State contributed Rs. 30,000 towards the construction of the new Larji-Mandi Road. **Administration.**

SUKET.

Area, 420 square miles ; population, 54,928 ; approximate revenue, Rs. 2½ lakhs ; army and police, 78 ; Raja Sir Bhim Sen, K.C.I.E., Rajput ; aged 33 ; has no male heir ; salute, 11 guns ; tribute, Rs. 11,000.

35. The title of K.C.I.E. was conferred on His Highness the Raja on 1st January 1918. **Personal.**

36. Government accepted His Highness' offer of a contingent of 50 men under his uncle, Mian Ganga Singh, for service and also contributions of Rs. 24,000 and Rs. 7,000 towards the expenses of the war. **The War.**

IV.—LAHORE DIVISION.

CHAMBA.

Area, 3,216 square miles ; population, 135,873 ; approximate revenue, Rs. 3,89,000 ; army and police, 419 ; Raja Sir Bhure Singh, K.C.S.I., K.C.I.E., Hindu Rajput ; has a male heir ; aged 48 ; salute, 11 guns ; tribute, Rs. 2,225.

37. His Highness did not enjoy very good health during the year but is reported to be better now. He attended the Viceregal Darbar at Lahore in April 1917 and the Delhi Conference in the autumn, and maintained the high standard of administration of previous years **Personal.**

38. The Raja is making personal efforts to stimulate recruiting in his State and to raise a Chamba Company for a Dogra Regiment. The State High School has now been included in the list of secondary schools recognised by the Punjab Education Department. **Miscellaneous.**

V.—STATES OF THE AMBALA DIVISION.

SIRMUR (NAHAN).

Area, 1,108 square miles ; population, 138,520 ; approximate revenue, Rs. 6 lakhs ; army and police, 633 ; Lieutenant-Colonel Maharaja Sir Amar Prakash, K.C.S.I., Rajput ; aged 29 ; has a male heir ; salute, 11 guns.

39. His Highness the Maharaja has administered his State efficiently in spite of ill-health, which compelled him to visit Dehra Dun for a part of the year and also prevented him from attending the Lahore Darbar in April and the Delhi Conference in November. He received the title of Maharaja as an hereditary distinction and the rank of Honorary Lieutenant-Colonel on 1st January 1918 in recognition of war services. **Personal.**

40. The Double Company of Imperial Sappers and Miners has been re-constituted and at the close of the year under report was serving in Mesopotamia. The Darbar contributed Rs. 8,500 to different war funds during the year and Rs. 5,000 to the "Our Day" Fund. **The War.**

KALSIA.

Area, 168 square miles ; population, 55,909 ; approximate revenue, Rs. 2,74,000 ; army and police, 164 ; Raja Ravi Sher Singh, Jat, Sandhu Sikh ; aged 15 ; has no male heir.

Personal.

41. The Raja continues to do well at the Aitchison College and has enjoyed good health. He attended the Viceregal Darbar at Lahore in April 1917 and spent the summer vacation at Mussoorie. On 13th February 1917 he was betrothed to the daughter of His Highness the Maharaja of Patiala. The Raja's step-sister was betrothed on 15th February 1918 to Kanwar Nau Nihal Singh, son of Kanwar Baldeo Singh, of Marsan, a Jagirdar in the United Provinces.

Administration.

42. The State was efficiently managed by the Council of Regency. A new Superintendent of Forests, who holds a diploma of the Lyallpur Agricultural College, has been appointed to manage the State forests, which are reported to be well worked according to the revised plan.

The War.

43. Recruiting has made successful progress. The State contributed Rs. 14,000 to the "Our Day" Fund.

PATAUDI.

Area, 53 square miles ; population, 19,543 ; approximate revenue, Rs. 1 lakh ; army and police, 77 ; Nawab Muhammad Iftikhar Ali Khan, Bahadur, Afghan ; aged 8 years ; has no male heir.

Personal.

44. Nawab Muhammad Ibrahim Ali Khan died at Delhi on 29th November 1917 and was succeeded by his eldest son, Nawab Muhammad Iftikhar Ali Khan, who was formally installed in February 1918. A Council is now managing the State under the supervision of the Commissioner.

The War.

45. The State has invested Rs. 63,000 in the War Loan and has subscribed towards the "Our Day" Fund and the War hospital at Ambala.

LOHARU.

Area, 224 square miles ; population, 18,597 ; approximate revenue, Rs. 1,00,684 ; army and police, 80 ; Nawab Sir Amir-ud-din Ahmad, Khan Bahadur, K.C.I.E., Mughal ; aged 58 ; has a male heir ; salute 9 guns.

Personal.

46. The Nawab is gradually associating his son and heir in the general management of the State. He visited Almora owing to the ill health of the Begum who has since died. In recognition of his war services the Nawab's personal salute of nine guns was made permanent on the 1st January 1918.

The War.

47. The State subscribed Rs. 1,000 to Lady O'Dwyer's Comfort Fund and the same amount to the "Our Day" Fund. The Nawab presented Rs. 2,250 towards the Punjab Aeroplane Fleet Fund in 1915-16, a contribution of which mention was omitted in last year's report. The State has also invested Rs. 10,000 in the War Loan.

DUJANA.

Area, 100 square miles ; population, 25,485 ; approximate revenue, Rs. 77,170 ; army and police, 122 ; Nawab Muhammad Khurshaid Ali Khan, Bahadur, Pathan ; aged 34 ; has a male heir ; tribute 50 Cavalry on requirement.

Personal.

48. The Nawab's eldest son died in July 1917, and his second son, Iqtidar Ali Khan, is now the heir-apparent. On account of this bereavement and of the ill health of Iqtidar Ali Khan, the Nawab spent the greater part of the year outside his territory.

Miscellaneous.

49. The State contributed Rs. 1,600 to the "Our Day" Fund.

VI.—STATES UNDER THE POLITICAL CONTROL OF THE SUPERINTENDENT, HILL STATES, SIMLA.

50. The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles including feudatories.	Population in 1911.	Approximate revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and Police.	Remarks.
				Rs.	Rs.							
1	Bilaspur ...	448	93,107	3,33,425	8,000	Bijai Chand, K.C.I.E., C.S.I.	Rajput ...	45	Raja ...	Yes	204	Permanent salute, 11 guns.
2	Bashahr ...	3,820	38,957	1,44,442	3,945	Padam Singh ...	Do. ...	44	Do. ...	Yes (adopted)	13	
3	Nalagarh ...	256	49,230	1,57,460	5,000	Jogindar Singh ...	Do. ...	48	Do. ...	No	48	
4	Koonthal ...	116	25,354	1,00,971	...	Hamendar Sen ...	Do. ...	13	Do. ...	No	36	Tributaries of Bashahr.
5	Baghal ...	124	26,008	63,976	3,600	Bikram Singh ...	Do. ...	25	Do. ...	Yes	25	
6	Bhagat ...	36	8,797	50,000	...	Durga Singh ...	Do. ...	17	Rana ...	No	43	
7	Jubbal ...	288	23,637	1,98,063	2,520	Bhagat Chand ...	Do. ...	29	Raja ...	Yes	19	
8	Kumharsain ...	90	12,219	30,000	2,000	Vidyadhar Singh ...	Do. ...	23	Rana ...	No	7	
9	Bhajji ...	96	14,972	33,504	1,440	Bir Pal ...	Do. ...	12	Do. ...	No	32	
10	Mailog ...	43	8,563	37,783	1,440	Durga Chand ...	Do. ...	20	Thakur ...	No	16	
11	Balsan ...	51	6,225	18,500	1,080	Bir Singh ...	Do. ...	54	Rana ...	Yes	...	
12	Dhami ...	26	4,484	30,000	720	Hira Singh, C.I.E. ...	Do. ...	41	Do. ...	Yes	25	
13	Kothar ...	20	4,016	17,000	1,000	Jagjit Chand ...	Do. ...	31	Do. ...	Yes	8	
14	Kunihar ...	80	2,208	6,000	180	Bardeo Singh ...	Do. ...	20	Thakur ...	No	9	
15	Mangal ...	12	1,267	1,000	72	Tilok Singh ...	Do. ...	67	Rana ...	Yes	...	
16	Bija ...	4	1,064	5,000	124	Puran Chand ...	Do. ...	22	Thakur ...	Yes	8	
17	Darkoti ...	8	521	7,000	...	Ram Saran Singh ...	Do. ...	75	Rana ...	Yes	...	
18	Taroch ...	67	4,493	50,000	288	Surat Singh ...	Do. ...	31	Thakur ...	Yes	...	
19	Sangri ...	16	3,022	5,700	...	Hira Singh ...	Do. ...	61	Rai ...	Yes	...	
20	Kaneti ...	19	2,854	8,590	...	Amog Chand ...	Do. ...	27	Thakur ...	No	...	Tributaries of Koonthal.
21	Delath ...	42	1,892	2,743	...	Narindar Singh ...	Do. ...	68	Do. ...	Yes	...	
22	Koti ...	50	8,265	44,154	...	Raghbir Chand ...	Do. ...	58	Rana ...	Yes	56	
23	Theog ...	144	6,345	14,591	...	Padam Chand ...	Do. ...	32	Thakur ...	Yes	8	
24	Madhan ...	9	3,901	5,500	...	Randhir Chand ...	Do. ...	31	Do. ...	No	6	Tributaries of Keonthal.
25	Ghund ...	28	1,887	5,610	...	Ranjit Singh ...	Do. ...	35	Do. ...	Yes	...	
26	Ratesh ...	12	472	700	...	Hira Singh ...	Do. ...	50	Do. ...	Yes	...	Tributaries of Jubbal.
27	Rawin ...	7	749	4,591	...	Kidar Singh ...	Do. ...	41	Do. ...	Yes	...	
28	Dhadi ...	25	244	1,600	...	Dharm Singh ...	Do. ...	30	Do. ...	Yes	...	

51. His Highness the Raja was granted the title of K.C.I.E. on the 4th June 1917 in view of the continued good service of his State in supplying recruits to the Indian Army. Bilaspur.

52. With the approval of Government the post of Wazir was abolished and a Council established to carry on the administration. The Raja has shown great energy in enlisting no less than 697 recruits

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during the year. The State invested Rs. 1 lakh and its subjects another Rs. 15,000 in the first War Loan. It is subscribing Rs. 2 lakhs to the new loan of 1918.

Bashahr.

53. The post of Manager, Bashahr State, was abolished on the 30th November 1917. Raja Padam Singh has been invested with full powers, subject to certain minor reservations, and has assumed control of the administration. The pseudo-Rana Bahadur Singh again appeared in the State towards the close of the year under report, but the Raja promptly arrested the impostor.

54. The Raja has shown great personal interest both in securing subscriptions from his subjects to the War Loan, in the shape of Post Office Cash Certificates, and in recruiting. He had invested Rs. 2 lakhs in Government loans in 1915 and 1916, so that the advent of the War Loan found him with no further surplus to invest. The inhabitants of the State, however, subscribed Rs. 47,806, almost entirely in the form of Post Office Cash Certificates.

55. Bashahr was the first of the States in the interior to supply recruits, who numbered 138.

Nalagarh.

56. Subscriptions to the War Loan during the year amounted to Rs. 1¼ lakhs from the Raja and 181 recruits were enlisted.

Keonthal.

57. The minor Chief is being educated at the Aitchison College and is making good progress. The administration of the State has proceeded satisfactorily during the year and the finances are being steadily re-established.

Baghal.

58. Rai Sahib Mian Durga Singh, Manager, was accorded the title of Rai Bahadur during the year and is doing well in Baghal.

59. The elder of the Raja's two sisters was married in February 1918 to the Rana of Kumharsain. The youngest Rani died in March.

60. Twenty-nine recruits have been supplied during the year and Rs. 20,000 were invested in the War Loan.

Baghat.

61. Rana Durga Singh was married to a sister of the Raja of Tehri-Garhwal in November 1917. The title of Rai Sahib has been conferred on Kanwar Amar Singh, uncle of the Chief and Manager of the State. The young Chief's education is now practically completed.

62. Rupees 25,000 was invested by the State in the War Loan and 52 recruits were furnished in 1917-18.

Jubbal.

63. The hereditary title of Raja has been conferred on the Chief, who is administering his State very efficiently. The Rani Sahiba died on 30th March 1918. The Raja made a further donation of Rs. 5,000 during the year to the St. John Ambulance Association, and presented a motor launch for use in Mesopotamia at a cost of Rs. 8,000. The total number of recruits enlisted during the year was 113. They include the brother of the Chief who now holds the rank of Jamadar in the 41st Dogras.

Kumharsain.

64. Rana Vidhyadhar Singh was invested with the powers of Manager of his State on the 23rd September 1917, the Government Manager being withdrawn. The Rana, whose first wife had died, was married on the 1st February 1918 to the elder sister of the Raja of Baghal. Rupees 20,000 were invested in the War Loan.

Bhajji.

65. Rana Bir Pal was installed on the 22nd February 1918. The administration of the Council is still on the whole satisfactory. Rupees 30,000 were invested in the War Loan.

Mailog.

66. The Thakur's course at the Aitchison College is now practically concluded.

67. Investment in the War Loan amounted to Rs. 30,000 from the State.

68. The Administration is proceeding smoothly. Rs. 20,000 were invested in the War Loan. Balsan.

69. The Settlement Report referred to in last year's report was submitted to Government and the Chief was congratulated on his work. Dhami.

70. Thakur Hardeo Singh continues to do well and was invested with full powers subject to certain minor restrictions. Kunhiar.

71. At the request of Rana Tilok Singh, who is now 67 years of age, his son, the Tikka Sahib, has been permitted to act as regent of the State. Mangal.

72. Thakur Puran Chand was installed on the 23rd January 1918. Bija.

73. A long standing dispute between Taroch and Jubbal has been amicably settled by the two chiefs. The proposed investment of Rs. 50,000 in the War Loan was duly made. Taroch.

74. The Tikka of Koti was married in February 1918 to a daughter of the Thakur of Theog. Koti.

75. The State invested Rs. 10,000 in the War Loan. Its settlement concluded on the 31st March 1918.

Frontier Affairs.

76. The peace of the frontier in the Dera Ghazi Khan District was temporarily disturbed in the spring of 1918 by the insurrection of the Marris, a Baluch tribe in the Baluchistan Agency. The only incident in this outbreak which directly affected this Province was a raid made on the small hill station of Fort Munro and the adjoining police station of Khar by a force of Khetrans and Marris. The raid was repulsed and the military punitive expedition into the raiders' country promptly ended the trouble. The conduct of the Dera Ghazi Khan Tumandars was exemplary. The Hon'ble Nawab Sir Bahram Khan, Mazari, stayed at Dera Ghazi Khan during the period of anxiety and by virtue of his great experience of the men and matters concerned was able to give valuable assistance and advice to the military and civil authorities. The other Tumandars remained in their tribal territory administering tribal matters and sending information to headquarters.

77. Particular credit is due to S. Hasan Khan, uncle of the Gurchani Chief, and S. Paind Khan, acting Bozdar Chief, who were able to keep their tribes from joining in the insurrection despite pressure put on them by the rebels.

78. Sardar Lashkar Khan, Tumandar of the Gurchani tribe, died on 28th May 1917, and was succeeded by his elder son Sardar Ghulam Haider Khan. The actual management of the tribe has been placed in the hands of S. Hasan Khan, brother of the late Tumandar, who has been given 1st class magisterial powers. The young chief is inexperienced and it is hoped that under the guidance of his uncle he will develop the strength and judgment essential for proper administration of this somewhat turbulent tribe.

79. S. Fazal Ali Khan, Tumandar of the Kasranis, died on the 27th July 1917, and was succeeded by his second son, Sardar Imam Bakhsh, who has been given 1st class magisterial powers.

80. Both the autumn and the spring sessions of the Chiefs' Jirga during the year under report were interfered with, the former by abnormal rains and the latter by the Marri rising. His Honour the Lieutenant-Governor held a Darbar at Dera Ghazi Khan on the 18th February 1918.

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9.—Condition of the People.

81. The health of the year was influenced adversely by the exceptional meteorological conditions. An active and early monsoon, which set in at the beginning of June, continued till late in October. As a result of this, a severe epidemic of malarial fever spread over the Province from September 1917 onwards, causing a heavy death rate. The general birth rate—43·3 *per mille*—though slightly less than that of the preceding year, exceeded the average of the previous five years by 1 *per mille*. The death rate—37·9 *per mille*—exceeded that of the preceding year by 7·2 *per mille* and the average of the previous quinquennium by 6·7. The malarial epidemic contributed mainly to this unsatisfactory result.

82. The material prosperity of the agricultural population maintained its former level. The spring harvest of 1918 was excellent, the prices of agricultural produce were high and the continuous recruitment for the army provided a wide field of employment and an expanding source of income. Trading and commercial classes generally benefited from high prices while those with fixed incomes suffered correspondingly. Wage-earners were more than compensated for high prices by high wages, the demand for labour of all kinds having been unusually keen.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this Chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the Revenue—Revenue Surveys and Settlements— } Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1917.

Professional Surveys.—General Report on the Operations of the Survey of India for the year ending 30th September 1917.

Waste Lands and Government Estates.
1. Annual Report on the Punjab Colonies for the year ending 30th September 1917.
2. Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1917.

Wards' Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1917.

Revenue and rent-paying classes.—Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1917.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I.

Area Totals—Table 1 J.
Classification of Area—Table 2 I.
Incidence of Land Revenue—Table 5 I.
Transfers of Land—Table 6 H.
Changes in Boundaries—Appendix B.

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and collection.

83. The fixed land revenue demand rose from Rs. 226·29 to 231·51 lakhs or a net increase of 5·22. The gross increase was 8·51 lakhs due mainly to increases on account of the introduction of revised assessments in nine districts, but against this must be set off a gross decrease of 3·28 lakhs due chiefly to reduction of assessments on account of wells falling out of use or alteration of assessments from fixed to fluctuating. Of the total demand, 230·50 lakhs or 99·6 per cent. was collected and, excluding small amounts placed under suspension and undetermined or irrecoverable balances, only Rs. 8,000 remained uncollected at the end of the year. Owing to favourable agricultural conditions there was little need of suspensions and remissions, and the total sum under suspension, including previous years, was reduced from 16·26 to 5·63 lakhs, only Rs. 18,000 of this reduction being due to remission of amounts formerly under suspension.

Riverain action.

84. As a result of alluvion and diluvion operations there was a net increase of Rs. 21,000 to the fixed land revenue roll as compared with Rs. 10,000 last year. The total assessable area of the province was increased through alluvion by 7,000 acres, while the revenue demand was enhanced on account of improvement by deposit of silt on 36,500 acres and reduced for deterioration on 15,000 acres.

FLUCTUATING LAND REVENUE.

Demand and collection.

85. Collections of true fluctuating revenue rose from Rs. 122 to 138·3 lakhs, the increase being due to timely rainfall, to satisfactory supplies in the canals, both perennial and inundation, to the development of canal irrigation in the Sialkot, Montgomery, Lyallpur and Multan Districts and to more villages in the Gujrat District being brought under fluctuating assessment. The outstanding balance of fluctuating revenue was only Rs. 28,000 at the close of the year.

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Other Land Revenue.

Demand and collection.

86. Collections of "other land revenue" amounted to 40·3 lakhs or a little over 2 lakhs more than last year, but it is important to remember that 31 lakhs of this represent payments for the sale of Government land, and must be regarded as the realization of capital rather than as recurring income.

Miscellaneous.

87. The favourable conditions of the year are reflected in the number of coercive processes. These fell from 16,129 to 12,430, and no less than 90·5 per cent. of the outstanding arrears were collected. There were no cases of imprisonment, only one sale of immoveable property and only one warrant for its attachment. The Multan Division is again responsible for the largest number of processes, but the figures show an improvement on those of the previous year, and it appears that the special efforts made to enforce punctuality have been largely successful. The experiment of serving revenue processes through the post has been very successful in Gujranwala and is being tentatively extended to other districts. In Lyallpur District the average number of processes issued was rather less than three per lakh of rupees collected as against rather more than six last year. This indicates a satisfactorily high standard of efficiency in collection and is an eloquent testimony to the prosperity of the district.

88. Fifteen new jagirs, 3 of Rs. 1,000 each, 4 of Rs. 750 each and 8 of Rs. 500 each, were granted in recognition of distinguished services rendered in connection with the War, to the administration and in public life.

89. An important experiment with the object of encouraging the cultivation of food-grains has been made by relaxing the rules regarding leases of Government waste land, and a large area has been given out on favourable terms to lessees for two years for the cultivation of such crops.

11.—Professional Surveys.

Surveys.

90. The Punjab Riverain Detachment of the Survey Department carried out riverain surveys on the Indus, Chenab, Ravi and Jumna in connection with the Dera Ghazi Khan, Multan and Ambala Settlements. 977 linear and 1,796 square miles of main circuits and 2,216 linear and 421 square miles of minor traverses were run and 1,359 theodolite stations of the former and 8,535 of the latter were fixed in the area under river action. 748 square miles were demarcated with permanent mark stones on both banks of the Indus and the Jumna to serve as bases for the future survey and demarcation of boundaries and fields in the beds of the rivers. 1,231 plotted and 355 boundary mapping large scale sheets and 31 4-inch sheets were traced and supplied to the Settlement Officers of Dera Ghazi Khan and Ambala. In Kangra 414 traverse stations were computed and plotted on 4-inch sheets. 1,187 plotted *masavis* of tikas, 102 enlarged boundary *masavis* and 18 traces of 18 4-inch sheets were supplied to the Settlement Officer, Kangra. 43·30 miles of road were surveyed in the Kangra District and 55 linear miles traversed. 29 sheets of the main road and 203 sheets of 20 bazars surveyed last year were plotted, typed and examined. The computation volumes of the Simla District were completed during the year. Traversing was undertaken for a 3-inch military survey close to Hatti in the Attock Tahsil and 18 linear miles were traversed and theodolite stations thrown and their heights taken. The total expenditure was Rs. 91,060.

91. A new survey party was formed on the 15th June 1917 for the purpose of undertaking the rectangulation of the Sind Sagar Doab in connection with the irrigation and colonization project for that area and was given a course of preliminary training preparatory to starting field work in the cold weather of 1917-18. During the winter of 1916-17 the Great Trigonometrical Survey sent a detachment to run a series of secondary triangles through the Doab, emanating from the Great Indus Series, which flanks the western side of the area. This series will act as a foundation on which to base the network triangulation now in progress.

92. Topographical survey operations were continued under No. 1 and No. 2 Parties, N. C., which surveyed an area of 1,679 square miles and 324 square miles, respectively, on the 1-inch scale in Gurdaspur, Hoshiarpur, Kangra and Gurgaon Districts and in the Chamba, Nabha and Patiala States. No. 2 Party also triangulated an area of 125 square miles in the State of Patiala.

Boundary delimitation.

93. A draft bill for compulsory demarcation of a fixed provincial boundary on the Jumna is under the consideration of the Punjab and United Provinces Governments. The long standing boundary dispute between the villages of Nangal-Mubarakpur in District Gurgaon and Lipala and Baloj in the Alwar State was amicably settled during the year. A partial re-demarcation of the Jammu boundary with Sialkot has yet to be carried out. The dispute between Mianwali and Bannu was settled without any alterations in Mianwali District boundary. A block of 93 acres of land was transferred from Lyallpur to Jhang in order to avoid the administrative inconvenience which was caused by the fact that the previous boundary line between these districts passed through the Shorkot Road Railway Station.

12.—Revenue Surveys and Settlements.

94. At the beginning of the year five settlements were in progress and, of these, Simla and Jullundur were brought to completion. The settlement of Dera Ghazi Khan was commenced.

95. The Simla settlement lasted rather more than $2\frac{1}{2}$ years, costing Rs. 26,700, and the enhancement of revenue amounted to Rs. 3,077.

96. In Jullundur, work was completed in $3\frac{1}{2}$ years. The net cost of the settlement was approximately Rs. 4,85,000 and will be recouped in $1\frac{1}{2}$ years from the initial enhancement imposed which amounts to Rs. 3,56,000. The final enhancement will be Rs. 4,88,000 round.

97. The assessment reports of the Nurpur Tahsil of Kangra, of the Kotgarh *ilaqa* of Simla, and of the Rupar and Kharar Tahsils of Ambala District were received and orders passed on them either during the year or shortly after its close.

98. The orders of Government were issued in regard to the period of the recent Lahore and Gujrat settlements. For Lahore the term of settlement in the case of agricultural assessments has been fixed at 20 years, while in the case of urban assessments, both in Lahore itself and in the outlying markets, the term sanctioned is 10 years. The purely fluctuating assessments imposed are liable to conversion into fixed assessment at the end of 10 years. In he villages of Gujrat, which already receive canal irrigation or will receive it within the next ten years, the assessments will run for that period, while in those areas which will not receive such irrigation, either now or in the future, no enhancement of the fixed demand will be made for 30 years. Although no expectation of a longer term than 20 years has been raised in these latter areas, yet, in recognition of the facts that the agricultural tribes of Gujrat, especially in the areas that will not be benefited by the canal, are, as a rule small self-cultivating peasant proprietors, and that large numbers of them are in the army, Government decided to fix a term of 30 years for these areas. In the riverain tracts where deterioration is possible an examination into their condition, with a view to seeing whether a reduction of the demand may be necessary, is to be made after 20 years.

13.—Land Records.

Patwaris.

99. The Collectors of most districts are satisfied with the general conduct and efficiency of their patwaris. Even in some districts, where extra work entailed by the war made it impossible for revenue officers to exercise close supervision over the patwaris, it is reported that there was no resulting falling-off in the standard of their conduct and efficiency. There was a decrease in the number of dismissals during the year from 115 to 111 and in other punishments from 2,593 to 2,336, while good

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work was rewarded by the promotion of patwaris to superior posts in 36 cases as against 17 last year.

100. All the reduced settlement kanungo candidates have been now provided for, and the block in the promotion of patwaris has been thus removed; and it was also found possible to select some of the latter as settlement kanungos after the close of the year.

Kanungos.

101. The work of kanungos is described as satisfactory in all districts except a few. The Director of Land Records thinks that their work is not fully supervised and the Financial Commissioner fully agrees with him. The matter is one which demands constant and unremitting attention on the part of Deputy Commissioners operating through the agency of their Revenue Assistants. The experiment of confining the District Kanungos' tours to tahsil inspections, which was under trial in four districts, did not prove a success, and during the year under report was abandoned with the approval of Government.

Records.

102. During the year settlement work was brought to a close in Jullundur and Simla and revision of records was commenced in two tahsils of Dera Ghazi Khan and in the three southern tahsils of Ambala District. The duration of operations in Kangra has been extended up to 30th June 1918 for the full staff, and up to 31st December 1918 for a reduced staff.

103. The plan of appointing a special official to lay the revenue records or excerpts from them before civil courts is reported to have worked well in the four districts where it was tried, and on the recommendation of the Hon'ble Judges is about to be extended to all districts. The extra cost has hitherto been covered by fees payable by the parties, and the scheme is therefore self-supporting. An essential feature of the scheme is that in some, perhaps in many instances, the courts will, in lieu of examining the original record of rights or attested copies of extracts from them, accept an excerpt or abstract prepared by an official, or take that official's oral evidence regarding the general effect of all relevant entries.

14.—Waste Land and Government Estates.

The Lower Jhelum Colony.

104. The agricultural conditions were, on the whole, fairly favourable on the Lower Jhelum Canal. The kharif harvest of 1916 was, owing to an abundant monsoon, much better than its predecessor; though the winter rainfall of 1916-17 was deficient and the canal supply restricted, the area of rabi sowings exceeded 395,000 acres and only 5 per cent. of this failed.

105. As the conditions of tenure do not provide for the acquisition of proprietary rights, the administration of this colony has special features from which other colonies are free and throws a heavy burden of work on the district staff. The Financial Commissioner has recently reviewed the proposal for the grant of proprietary rights which is being examined by Government. In other directions steps are being taken to reduce colony work, and to bring the administration of the district into line with that of others.

106. The development of the market towns in this colony is still somewhat slow, even when allowance is made for the fact that each serves a smaller agricultural tract than those of the Lower Chenab Canal area, and that the old system, whereby a share of the sale-proceeds of sites was made available for local improvements, has been replaced by grants of a definite amount for the same purpose. The chief problem in all these towns is that of water-supply. The condition of the roads has received attention, and it is hoped that, with the help of the increased grants now provided by Government for the purpose, it will be possible to put them in a satisfactory condition. The need for a more enlightened railway policy is emphasized. The attention of the Railway authorities has been drawn to it, and it is hoped that a more liberal policy will be adopted at the earliest possible opportunity.

107. The remodelling of the Lower Jhelum Canal is in the project stage.

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108. In the Upper Chenab Colony 57,501 acres have been allotted out of a total allotable area of 79,929 acres, leaving 22,428 still left for distribution. Some 20,000 acres of this are in the Sharakpur Tah sil, and it is evident that this part of the colony must receive attention for some time. In the Jaranwala Tahsil allotment has been practically completed by the distribution of 1,695 acres in compensatory grants to Ravi zamindars, and the southern portion of the Colony may be expected to settle down rapidly. Conditions will not, however, be quite satisfactory till the Colony, which is now spread over two districts, is brought into the new Sheikhupura District, the proposals for which are under the consideration of the Government of India. The Upper Chenab Colony.

109. The revised conditions in these areas of Crown land on the Upper Chenab Canal in the Gujranwala District, which are irrigated in one harvest only, have been given effect to, and it is hoped that they have put matters on a sound basis.

110. The Colony is still defective in village sites and communications and the excessive rains last autumn retarded improvements in this and other respects.

111. A proposal to locate an experimental farm for rice cultivation in the neighbourhood of Kala Shah Kaku Railway Station has been sanctioned. A portion of the tract is famous for a very good quality of rice, and the prospects of development in this direction are hopeful.

112. In the Lower Bari Doab Colony the situation has been so greatly altered by the recent soil survey that the figures of allotable area shown in the Colonization Officer's report are misleading to the extent that they make no deduction on account of the very large area shortage of over 300,000 acres in the culturable area disclosed by the survey which has necessitated considerable modifications of the colonization scheme. Special importance therefore attaches to proposals designed to provide land elsewhere and to bring areas under cultivation. But the main hope of making good the deficiency rests on the hydro-electric project and on the late Mr. Barnes' comprehensive scheme for the reclamation of "bara" land. The Lower Bari Doab Colony.

113. The result of sales was distinctly satisfactory: 8,570 acres were sold by auction and 6,172 by private treaty during the year at an average price of Rs. 229 and Rs. 219 per acre, respectively. Nine thousand acres auctioned in March 1918 fetched an average price of Rs. 330 per acre—a considerable advance on any previous figure and nearly 50 per cent. above the average of the auctions of the four previous years. The agricultural year in the Lower Bari Doab was a somewhat chequered one. The most interesting fact in the agriculture of the Colony is the great development of American cotton, mainly or entirely of the 4-F. variety which is favoured by the Agricultural Department. The increase in the cultivation of American cotton is encouraging. The popularity of this crop continues to grow and the figures for kharif 1917—American cotton 81,440 acres and Indian cotton 53,380 acres—are most striking. Though both varieties were damaged by the heavy and untimely rainfall at the end of September, the American cotton came much better out of the ordeal than the Indian. The provision of roads appears to be hardly keeping pace with the general development of the Colony, especially in the Montgomery District. It is to be hoped that the substantial grant of 2 lakhs, recently sanctioned by Government for the purpose, will result in considerable improvement during this financial year. In Montgomery District 31 miles of road were completed while the jungle was cleared off some 128 miles, 139 miles were aligned, and 5 miles were metalled, while on 14 miles arboricultural operations were carried out.

114. In the Multan District 65 miles were marked out, jungle clearance was effected on 119 miles, and earthwork was done on 124 miles, while in and beside Khanewal metal was laid on 3½ miles.

115. The new market towns in the Colony promise well: the number of sites of different kinds sold in each of these during the year and the high prices realised indicate the confidence of the public in the prosperity of the

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Colony. Competition was keenest at Mian Channun, where an average of Rs. 2,020 was realised for a bazar site and Rs. 1,741 for a mandi shop. Only Jahanian seems to be at a standstill, but this place will doubtless develop as the cultivation of the southern portion of the Colony advances. Khanewal should also increase in importance now that the Government buildings are practically complete. The constitution of the new tahsil is about to be notified.

116. The new ginning factories at Mian Channun and Okara have been built in accordance with plans approved by the Agricultural Department; in future it will be a condition of the sale of factory sites that the plans must be submitted to the Director of Agriculture for approval.

The Upper Jhelum Colony.

117. Some 32,000 acres out of the total area of the 43,000 available have been allotted on the Upper Jhelum Colony and of the balance only 7,000 acres are commanded by flow. But less than a quarter of the area has so far come under cultivation, as irrigation arrangements have not been completed.

118. Rupees 20,000 were sanctioned for expenditure on roads in this Colony during 1917-18 and a programme has been approved. This, added to the allotment recently made by Government for roads in the Upper and Lower Jhelum Colonies, will enable the local authorities to expedite the scheme for the construction and improvement of roads.

15.—Wards' Estates.

119. The number of estates under the superintendence of the Court of Wards at the end of the year was 41, representing an area of 335,061 acres of land, jagirs of the value of Rs. 3,24,445 and gross assets of more than 262 lakhs. The success with which these estates are administered is shown by the fact that though many of them were encumbered by debt when management was assumed, there is now only one, the Atari estate in Amritsar, in which assets do not show a substantial excess over liabilities. During the year a sum of nearly 5¼ lakhs of rupees, or more than a quarter of the total annual income, was invested in the Indian War Loan. The estate of the Nawab of Mamdot, much the largest under the Court of Wards, led the way with an investment of 2 lakhs, while the Kot estate subscribed one lakh. During the year three estates were released after a successful term of superintendence. The most important of these was the Sidhowal estate in Karnal, which in seven years was freed from a debt of nearly a lakh and placed in a sound financial position. Owing to the large investments in the war loan only a comparatively small sum was devoted to the purchase of land. Increased attention is being given to the experimental farms on the Mamdot and other large estates, as by means of these the Court of Wards can set an example of enterprising and economical management to the large land-owners of the province generally. Two wards are going through the Vernacular course at Lyallpur, and it is hoped that the new buildings for the accommodation of youths of this position will attract many more wards to the Agricultural College for a longer period of training, as a couple of years at Lyallpur cannot fail to be of immense value to a youth who will ultimately have to manage a large estate. The wards who are receiving their education at the Aitchison Chiefs' College are doing well, and a report received from the Principal shows that there has been a real improvement in boys of this class within the last generation.

16.—Revenue and Rent-paying Classes.

General.

120. The total area of the province as entered in the revenue records stands at 54·70 million acres. Of this a little over 34 million acres are owned by agricultural tribes, 5½ million acres by others and 15 million acres are divided between common lands, village sites and Government property. There has been an increase, as compared with the figures of last year, of 64,000 acres in the gross and one of 294,727 acres in the cultivated area. The increase in the total area is mainly due to re-measurements at quadrennial attestations and settlements. The increase in

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the cultivated area is mainly due to the cultivation of land given up by the Railway in the Hissar District to the original owners from whom it had been acquired, to the breaking up of waste land owing to favourable rainfall in Hissar, Karnal, Lahore and Mianwali, and to extension of irrigation in Sialkot, Gujranwala and Montgomery. The cultivated area under mortgage has again slightly increased, but the percentage of this to the total cultivated area is the same as in the previous year, 11·5.

Loans under the Land Improvement Loans Act, XIX of 1883.

121. The same amount was advanced for improvement as last year, *viz.*, 1·4 lakhs. Tahsildars in Gurgaon District were instructed to encourage the sinking of wells and to make loans under the Act more popular, and as a result advances in the district rose from Rs. 8,150 to Rs. 24,110. Suggestions for making loans for improvements more generally popular are under consideration.

Loans under the Agriculturists Loans Act, XII of 1884.

122. Owing to favourable agricultural conditions there was a decrease this year in the amount advanced under the Agriculturists Loans Act from 8 to 1·5 lakhs. Advances were mainly given in the districts of Gurgaon, Attock, Mianwali, Montgomery, Muzaffargarh and Dera Ghazi Khan.

Transfers.

123. The cultivated area sold during the year was 107,227 acres, or only 428 acres more than in the previous year when the figures were the lowest for 20 years. Sales of uncultivated land fell from 126,700 acres to 112,314 acres. Nearly half of this latter area was in the Muzaffargarh District and the purchases in that district were probably mainly due, as in the previous year, to the anticipation of the construction of the Sind-Sagar Canal. The total cultivated (ownership) area redeemed during the year amounted to 187,400 acres, or 23,000 acres less than in the previous year. The reduction noticed in last year's report has thus continued. No very definite general reasons for the result can be gathered from the district reports, but doubtless it is partly, at any rate, attributable to war conditions in their economic aspect. Although redemptions have thus decreased, the Redemption of Mortgages Act appears to be slowly gaining in popularity and 2,932 cases, against 2,708 in the previous year, were disposed of under it. The cultivated (ownership) area mortgaged during the year was 219,712 acres, or 7,684 acres less than in the previous year, but some 32,000 acres more than that redeemed during the year. The area transferred by gifts has advanced slightly from 79,600 acres last year to 86,000 acres this year. The area transferred by exchanges was 43,000 acres against 46,000 acres last year. The exchanges were chiefly due to consolidation of holdings—a matter of great agricultural importance.

Value of land.

124. The average recorded price of cultivated land (which, however, includes uncultivated land sold along with cultivated land) has risen from Rs. 216 to Rs. 227 per acre, and there is no doubt that the value of land is steadily rising. The rise is almost general throughout the province and is mainly due to the general rise in the prices of agricultural commodities and, in a probably smaller but still highly important degree, to the popularity with the agricultural tribes of land as an investment. For the province as a whole the sale prices in the year under review represent 157 years' purchase of the land revenue assessed, as against 151 years' purchase in the previous year and 66 times 20 years ago. No better proof could be afforded of the leniency of the land revenue demand and of the remarkable increase of general prosperity within the last generation. The mortgage value of the land mortgaged during the year represents 85 times the land revenue assessment of the land, as compared with 88 times in 1915-16.

Land Alienation Act.

125. No new tribe was notified under the Land Alienation Act during the year. Agricultural tribes gained by purchase a net increase of nearly 21,000 acres against 20,000 acres in the previous year. Sales by agricultural tribesmen fell from 206,529 acres to 182,718 acres, and sales to them fell from 226,226 acres to 203,451 acres, while sales to others fell from 42,700 to 38,000 acres,—the smallest figure for any year since the passing of the Act. The measure continues to command the increasing confidence and approval of the peasantry of the province. In areas

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which were in the past permeated with agricultural indebtedness it is regarded as having largely achieved its object and as being the Magna Charta of the zamindar.

Rent-paying classes.

126. The number of suits for enhancement of rent (1,421) and of successful suits of that class (1,267) have fallen by nearly half as compared with last year's figures. It is reported that in several districts, owing to the rise in the prices of grain and in the value of land and owing to new assessments, cash rents show a tendency to rise.

127. In ejectment proceedings, 120 decrees were given against occupancy tenants under section 39 of the Tenancy Act. An increase occurred in the number of applications for service of notice of ejectment on tenants-at-will and the ejectments of such tenants actually made rose from 4,881 to 6,592. No very satisfactory reasons for the increase have been advanced, but a definite tendency to permanent increase is not to be inferred from the figures of one year.

MISCELLANEOUS.

Punjab Land Preservation (Chos) Act.

128. The results obtained in Ambala and Hoshiarpur Districts by the restrictions imposed under the Chos Act are decidedly encouraging and indicate clearly that operations under this Act should be prosecuted diligently and developed. The financial situation prevented extension of operations during the year, but Government has now ordered that further action should be no longer delayed and necessary proposals have been called for. Meanwhile judicious encouragement is being given to any unofficial action likely to contribute towards the desired re-afforestation, and an extension of the practice of making grants to villages for the reclamation of Cho beds is under consideration. The assistance thus afforded is valuable not merely for the tangible results obtained, but also by way of encouragement and as a definite indication that Government is interested in a practical shape. Grants of Rs. 1,000 each to the Deputy Commissioners of Hoshiarpur and Ambala for reclamation and training of Cho beds were made during the year and Rs. 3,000 have been entered in next year's budget for the same purpose.

The Descent of Jagirs Act.

129. No jagir was notified during the year under the Descent of Jagirs Act. The total number of jagirs notified under the Act is 145.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1917.

(2) Report on the working of the Criminal Tribes Act for the year 1917.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1917.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1917.

Prisons.—Report on the Administration of the Jails in the Punjab, 1917.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1917.

Registration.—Report on the Administration of the Registration Department of the Punjab for the year 1917.

Legal affairs of Government.—Report on the Administration of Legal Affairs of the Government of the Punjab for the year 1917.

Local Boards Administration.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1917-18.

Municipal Administration.—Report on the working of Municipalities in the Punjab during the year 1917-18.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume IV, Administrative and Judicial (including area, population and local funds).

17.—Legislating Authority during the year 1917-18.

130. The following changes took place amongst the members of the Council :—

(1) The Hon'ble Mr. W. F. Holms was nominated in place of the Hon'ble Mr. D. W. Aikman, resigned.

(2) The Hon'ble Mr. C. J. Hallifax was nominated in place of the Hon'ble Mr. P. J. Fagan, resigned on nomination to the Imperial Council.

18.—Course of Legislation during the year 1917-18.

131. Eight meetings of the Legislative Council were held during the year under report at the Government House, Lahore (24th April 1917, 25th April 1917, 6th November 1917, 21st December 1917, 6th February 1918, 7th February 1918, 13th and 14th March 1918).

132. The following Bills were introduced in Council during the year :—

(1) The Punjab Vaccination (Amendment) Bill.

(2) The Restriction of Habitual Offenders (Punjab) Bill.

(3) The Simla House Bill.

(4) The Punjab Municipal Act (Amendment) Bill (regarding imposition of Terminal Tax).

(5) The Simla House Act (Amendment) Bill.

(6) The Punjab Village and Small Towns Patrol Bill.

133. Nos. (1) to (5) were passed while No. (6) was referred to a Select Committee.

134. The Juvenile Smoking Bill which was introduced last year was also referred to a Select Committee.

135. Out of the following seven resolutions—

(1) Resolution regarding fixing of 30 years as the ordinary term for a Land Revenue Settlement in the Punjab,

(2) Resolution regarding improvement of the condition of Primary Schools and the Lower Primary Department and further expansion of Primary Education,

(3) Resolution regarding recruitment of Professors of Anatomy and Physiology in the Medical College, Lahore,

(4) Resolution regarding improvement in the position of the teachers of classical languages in Anglo-Vernacular High Schools,

(5) Resolution regarding amendment of Rule 7 of General Rules for the conduct of business at the Punjab Legislative Council meetings by substituting the word "Urdu" for "English" in the first sentence and *vice versâ* in the second sentence,

(6) Resolution regarding Sanitation,

(7) Resolution regarding deduction and addition of Rs. 3,00,000 from certain budget heads to others,

Nos. (1) and (5) were lost, No. (2) was passed, No. (3) was amended and passed, whilst Nos. (4), (6) and (7) were withdrawn.

136. Three hundred and three questions were put and answered.

INDIA ACTS.

137. No Acts particularly affecting the Punjab were passed by the Imperial Legislative Council during the year.

19.—Police.

GENERAL POLICE FORCE.

General.

138. The number of true cognizable offences of all kinds dealt with by the Police in 1917 was less by 5,585, or 13·8 per cent., than in the previous year in which a reduction of 14 per cent. was shown. Excluding petty offences under local and special laws there were only 24,279 true cases as against 28,977 in the previous year, a reduction of 16 per cent. supervening upon a decrease of 24 per cent. in 1916. The remarkable decrease in crime which set in at the end of 1915 continued throughout the year under review notwithstanding high prices which, it may be added, were set off by high wages and the demand for labour resulting from war conditions. The undoubted prestige of the administration, and the almost universal success with which organized crime, revolutionary and ordinary, has been dealt with from the beginning of 1914 to the present date, have largely contributed to this very satisfactory result. The enlistment of bad characters in the Army, the impression created by the despatch of Convict Labour Corps to Mesopotamia, and the co-operation of the public also continued to operate favourably on criminal statistics. In addition, the registration and restriction of wandering criminal tribes were undertaken for the first time in the history of the Province during the year under review, and the successful operations of the Criminal Tribes Department and District Police in this connection had an excellent preventive effect. Further, the improvement in the organisation and training of the force that has been effected in the past three years, enabling the despatch of emergency forces at a moment's notice from other districts to districts affected by waves of lawlessness, has also simplified the task of stamping out epidemics of crime and has fostered inter-district co-operation which was very defective under the old water-tight compartment system of pre-war days. The co-operation of the public throughout the year has been acknowledged by cash rewards and some much coveted grants of land, while, on the other hand, failure to realise responsibilities in this connection and connivance at disorder have led to the punishment of village officers and the location of punitive posts of which 31 were in existence at the end of the year. This policy has been pursued with strikingly successful results for the past four years, and it is satisfactory to be able to note that, with a few exceptions, a marked feature of the year under review has been a due respect for law and order on the part of the public. Good evidence

of this satisfactory state of affairs is furnished by the fact that the great Hindu Dusehra festival and the solemn Muharram mourning of the Muhammadans were carried out side by side in peace and quiet throughout the province.

Murders and dacoities.

139. Murders have steadily decreased, with the exception of a slight relapse in 1916, from 625 in 1913 to 511 in the year under review. There was, however, an unfortunate epidemic of murders in the Shahpur District which was probably due to the encouragement given by poor detective and prosecution results to those anxious to prosecute the blood-feuds for which certain tracts of this district are notorious.

140. There were only 53 dacoities during the year; these figures being the lowest on record since 1910.

Burglaries and thefts.

141 Burglaries decreased from 13,477 in 1916 to 11,047 in the year under review, a result largely due to the registration and restriction of wandering criminal tribes, and the successful working of the *thikri pahra* system of patrolling.

142. Ordinary thefts similarly show a decrease of 846 cases, the figures being 5,753 in 1916 and 4,907 in 1917.

Police working.

143. Detection and prosecution results approximated to the standard attained in the previous year; the all-round percentage of cases convicted to true cases being 32·68 as against 32·70 in the previous year, while the percentage of cases and persons convicted to cases and persons tried was 72·43 and 57·32, as compared with 71·70 and 57·29, respectively, in 1916.

Preventive measures.

144. During the year under report, 2,655 persons were called upon to furnish security under section 110 of the Code of Criminal Procedure, as compared with 3,343 in 1916. The decrease is explained by the drop in crime and the continued enlistment of bad characters in the Army. The recent legalisation of the *thikri pahra* patrolling system and the passing into law of the measure for the restriction of the movements of bad characters will materially strengthen the preventive side of the criminal administration.

Criminal Investigation Department.

145. The Criminal Investigation Department continued to render excellent services to the administration throughout the year. There was little political crime, and in consequence the investigating officers were able to pay considerable attention to ordinary organised crime such as gang dacoities and *barda faroshi* (trade in women) with marked success. They also did useful work in the investigation and prosecution of important bribery charges against public servants. The few political prosecutions which took place during the year were an aftermath of the great conspiracy cases of 1915-16 and were brought to a successful issue. The energies of the department in this field were mainly bent to the surveillance of returned emigrants, some hundreds of whom, including many who had been more or less directly associated with the *Ghadr* movement in America and the Far East, returned to their homes during the year. Twenty-seven of these were temporarily interned and 87 restricted to their villages under the Ingress Ordinance. On the other hand, 28 internees were released, and a large number who had displayed good behaviour during confinement to their villages were freed from all restrictions, the number of persons restricted on probation to their home villages at the end of 1917 being 469 less than a year previously.

Finger Print Bureau.

146. During the year 29,424 references were received by the Finger Print Bureau at Phillaur for search, of which 5,567 were traced, as compared with 29,772 slips referred and 5,738 traced in the previous year. The number of finger impression slips on record at the end of the year was 251,391 as compared with 230,923 in 1916.

Internal economy.

147. During the year the mounted police was re-organized into troops and sections at certain selected centres. Hitherto this force had been merely a collection of mounted orderlies scattered in twos and threes all over the province, but their temporary concentration in 1916 to meet with disturbed conditions in certain tracts showed the superiority of the

troops and section organization which has now been adopted. At the close of the year a small committee was appointed by the Local Government to examine the constitution and working of the Railway Police which had not come under scrutiny in 1914 and 1915 when the Criminal Investigation Department and the general force were re-organized. The Committee's report was presented in the current year and orders have now been passed for the separation of the Railway Police from the Criminal Investigation Department, which in itself is a sufficiently onerous and responsible charge. The old arrangement has been reverted to whereby this branch of the force is placed under a whole-time Assistant Inspector-General assisted by a senior Assistant Superintendent, and the opportunity has been taken to re-organize and re-distribute the whole establishment.

Rural Police.

148. During the year 23 zaildars, 317 village headmen and 277 village watchmen were punished for neglect of their duties connected with the criminal administration, but on the whole the rural police rendered useful assistance to the regular force.

Criminal Tribes.

149. The year 1917 will remain a memorable one in the history of the Criminal Tribes for it witnessed the practical inauguration on an extensive scale of a new policy in dealing with them, a policy which, while continuing and rendering more effective all measures for the protection of society, has for its keynote reform rather than repression. The main principles of this policy were laid down in the report of 1914 of a small committee appointed to consider the subject and are as follows:—

(*i*) A strict and effective, but sympathetic, control over the worst tribes or divisions thereof, where possible through philanthropic bodies, combined with the provision of sufficient opportunity for them to earn an honest living within the area to which they are restricted.

(*ii*) The provision of definite conditions under which members of criminal tribes may, by continued good conduct, individually earn relaxation from restrictions and may thereby contribute towards the ultimate emancipation of the community from the operations of the Act.

(*iii*) Provision for the education of children so as to wean them from their hereditary criminal traditions and open to them fresh fields of thought and occupation.

150. Spasmodic attempts at reform had previously been made and the new policy had been mooted for some years, but until 1917 no organised effort had been made to bring these outcasts from society whose members—men, women and children—are estimated at from 125,000 to 150,000 souls, within the pale of civilization.

151. The scheme now brought into operation under the Criminal Tribes Act, III of 1911, and the rules made under its authority, provides first of all for the registration of all adult male members of notified criminal tribes, whose movements are, as a rule, restricted under section 12 of the Act. Registration is followed by classification and that by distribution, the worst characters being drafted to a reformatory settlement and those less undesirable and comparatively well behaved to Industrial and Agricultural Settlements, while others, constituting the majority, are allowed to remain in their own villages (to the area of which they are for the most part restricted or where they have to report their presence periodically) subject to supervision, with a view to ensuring that they have sufficient remunerative occupation and are kept out of harm's way. The best members of this class are exempted from all restrictions, and their names are struck off the criminal tribes register.

152. In order to effect these objects a strong central agency was necessary and this has been provided by a staff consisting of a Deputy Commissioner, a General Assistant (of the rank of Deputy Superintendent of Police), a Revenue Assistant (an Extra Assistant Commissioner) and

the necessary office staff. The report on the Administration of the Criminal Tribes in the Punjab in 1917 is the first report of the new department.

153. The work done during the year has not only been such as to justify the scheme, but has given rise to great hopes of the ultimate reclamation of the tribes.

154. The first work undertaken was that of registration and, as a result of simultaneous rounding up of the tribesmen throughout the province on specific dates, 10,820 adult male members of wandering gangs and 22,678 of settled tribes were brought on to the books.

155. After classification as described above, those marked down for special treatment were despatched along with their families to the various settlements which have been formed, *viz.*, a Reformatory Settlement at Amritsar, Industrial Settlements at Dhariwal, Montgomery, Shahdara, Bhiwani, Danepur, Chawa and Changa Manga, and Agricultural Settlements at Kot Adhian and Kot Mokhal. Four other settlements have been started since the close of the year. On the 31st December 1917 there were 418 inmates in the Reformatory, 1,223 in the Agricultural and 2,840 in the Industrial Settlements.

156. The Reformatory Settlement may be compared to a hospital and the other settlements to convalescent homes. During the nine months from the date of opening 1,930 persons including 919 registered members entered the Reformatory Settlement and all but 418 were passed on, mostly to other Settlements.

157. Work in these settlements, most of which are new, was attended by very considerable initial difficulties, due to the superstitious and untamed nature of the inmates, but, by sympathy combined with firmness, considerable success has already been attained; conduct has become satisfactory, good wages are earned and the inhabitants are gradually learning the value of leading respectable lives.

158. One very encouraging feature of the settlement work is the response by philanthropic societies and philanthropic business firms to the desire of Government to secure the co-operation of the people in the work of reformation. The Salvation Army, Ahmadiya Anjuman Isha'at Islam, Hindu Sabha, Arya Samaj, Dev Samaj, Anjuman-i-Islamia and Chief Khalsa Diwan have all come forward to undertake the management of one or more settlements; and it is a matter of satisfaction that organisations representing all the four great religions of the Province, Christian, Muhammadan, Hindu and Sikh, are taking a share in this benevolent work. The knowledge that Government is prepared to meet all reasonable expenses of management should encourage an extension of their operations as the number of settlements increases.

159. The initiation of the policy described in the previous paragraphs has involved an expenditure on the part of Government of over one lakh of rupees during the financial year ending on 31st March 1918, and a further considerable increase must be expected as the work expands. It may, however, be fairly claimed that there has already been a handsome indirect return on the money spent. The closer control exercised over the tribes generally, and the confinement of many of the worst criminals to settlements have unquestionably contributed substantially to the general decline in crime mentioned elsewhere, while the moral improvement of the tribes, illustrated by the drop in the percentage of registered members convicted from 10·8 in 1916 to 2·3 in 1917, should, if continued, enable Government in time to reduce its police establishment. Moreover, it is mainly owing to the active interest of the Deputy Commissioner and of his assistants that the army has secured nearly 1,000 recruits from the criminal tribes. It is to be hoped that the desire for military service will spread. There could be no more honourable road to social rehabilitation.

160. In November 1917 a conference was held at Lahore which was attended by representatives of the principal Native States in the Punjab

and of States adjoining its borders. All the States accepted the view that uniformity in the treatment of the criminal tribes was desirable and agreed to take action on the general lines adopted in the Punjab.

CHEMICAL EXAMINER.

161. In spite of the additional work undertaken during the year for the Military authorities the number of cases investigated by the Chemical Examiner dropped from 1,564 in 1916 to 1,427 in the year under review. The diminution was due apparently to the general decrease of crime which was only partially counterbalanced by an increase of articles examined for the Military Department. The references to the Imperial Serologist at Calcutta also show a decrease. Human poisoning cases accounted for 395 out of the 808 medico-legal cases. Opium ousted arsenic from the first place as a poisoning agent, and appeared in 34·8 per cent. of the detected cases as against 27·6 credited to arsenic. The poisoning agent in almost all the cattle-poisoning cases detected was arsenic.

20.—Criminal Justice.

General.

162. During the year under report crime was less than it has been since the year 1913 under both the Indian Penal Code and Special and Local Laws. For this there are several causes, and it is not easy to point to one that is applicable to the whole Province. The main causes of the decrease in crime as reported by various districts are—

(1) Recruiting for the army.

(2) Fear of being sent to the front from the jails.

(3) Registration of Criminal tribes.

(4) Enforcement of the system of village patrols.

(5) Greater co-operation between the Police and the people.

163. The total number of offences reported during the year was 180,319 as compared with 198,832 in the previous year, showing a decrease of 18,013. The number of cases found by the Criminal Courts to be true, *i.e.*, private complaints in which processes issued, and cases prosecuted by the Police, was 114,194, or 63 per cent. of the total number reported, the rest being cases dismissed under section 203, Criminal Procedure Code, or cases in which the complaint was held to be false or frivolous.

164. The number of cases brought to trial, *i e.*, true cases less those dealt with under sections 247 and 259 of the Criminal Procedure Code, during the year was 109,001, and the number of persons involved in them was 249,842, as against 121,034 cases and 283,212 persons in the preceding year.

Disposal of cases.

165. The total number of criminal cases disposed of during the year under report was 178,053, as compared with 201,801 in the previous year, showing a decrease of 23,748.

166. Of the 249,842 persons brought to trial 170,864, or 68·4 per cent., were acquitted or discharged and 64,890, or 26·02 per cent., were convicted. In the previous year the percentages were 70·1 and 24·9, respectively. Of the 170,864 persons acquitted or discharged 74,801, or 43·8 per cent., were discharged in consequence of the non-appearance of the complainant or the withdrawal of the complaint.

167. Under the Indian Penal Code reported offences have dropped from 140,242 to 126,426, and those admitted to have occurred, including offences reported during and pending from the previous year, from 88,571 to 76,781.

168. Of 160,806 persons brought to trial under the Indian Penal Code, 23,330, or 14·5 per cent., were convicted. Of 22,742 persons brought to trial under the Indian Penal Code whose cases were prosecuted by the Police 13,037, or 57·3 per cent. were convicted, but of the 138,064 persons tried on private complaints only 10,293, or 7·4 per cent., were convicted.

Serious forms of crime.

169. In the four more serious classes of crime, offences affecting life, robbery and dacoity, theft and the receiving of stolen property, there was a decrease of 10 per cent.

170. The number of persons brought to trial for murder (sections 302 and 396, Indian Penal Code) was 1,048, of whom 402 were convicted, and 192 death sentences were pronounced by Sessions Judges subject to confirmation by the Chief Court. About 68 per cent. of these sentences were confirmed, 16 per cent. were modified and 15 per cent. reversed. Murders.

171. In the case of 7 persons the sentences imposed by the Lower Courts were enhanced by the Chief Court to the capital penalty.

172. His Honour the Lieutenant-Governor commuted the death sentence of 5 convicts to transportation for life. His Excellency the Governor-General in Council commuted the death sentence of one convict to 14 years' imprisonment and detention in a lunatic asylum until further orders and the death sentence of 2 convicts to transportation for life.

173. The year was remarkable for the number of bribery cases instituted. Notable among these were the successful prosecutions of two Sub-Judges and an Extra Assistant Commissioner. The success which has attended these cases should go far to assure the people of the thoroughness of the effort which is being made to stamp out corruption in the public service. Bribery cases.

174. Matrimonial offences have decreased from 10,000 to 8,723, but the figure is still unduly large. Matrimonial offences.

175. Judged from the point of view of the small number of convictions as compared with trials, it does appear *primâ facie* that more action might be taken under section 203, Criminal Procedure Code, and the Hon'ble Judges consider that more cases would be dismissed under this section if they were heard in the first instance by experienced 1st class magistrates. It is, however, true that many of the infructuous trials of the past year would have met with success but for the facts that the sense of public duty is still small, that even impartial witnesses are not content to tell the plain unvarnished truth, and that discrepancies in the statements of witnesses are caused by what the District Magistrate of Hoshiarpur refers to as the badgering of ignorant rustics by pleaders awake to every technical point. The education of public opinion against crime is only in its infancy and its progress is bound to be slow; until it is much more fully developed it is idle to hope for a high percentage of convictions. Miscellaneous.

176. It is reported from certain districts, *e.g.*, Lyallpur and Amritsar, that there is some improvement in co-operation by the people in the prevention and detection of crime. Active co-operation is at present seen at its best in the assistance which is rendered by the people in patrolling the village by night. The Hon'ble Judges are confident that the placing of the system of village patrol on a legal footing and its extension throughout the Province will lead to a sensible improvement in the support given by the people to the administration.

177. An Additional Judge was again sanctioned for a portion of the year for the inspection of the work of the Lower Courts. The Hon'ble Judges have no doubt that this regular inspection of courts will do much to eradicate bad habits of work and to instil more method, sense of duty, and confidence that good work will not go unrecognised. As it is not always possible for the Inspecting Judge to visit all courts, the Hon'ble Judges directed local officers to inspect and submit notes on all 1st class stipendiary magistrates whose work the Inspecting Judge is unable to see. During the past cold weather the courts have been inspected by the Inspecting Judge at the headquarters of 20 districts and in 6 subdivisions. The Delhi Courts were also inspected.

21.—Prisons.

178. The only changes effected in the number and constitution of the jails during the year were the reduction of the District Jails at Jhelum, Mianwali, Jhang and Rohtak to subsidiary status, and the transfer of their populations to jails of concentration, for Military Labour. Camp Jails were opened at Dhariwal and Khewra to overcome the shortage of labour at the Woollen Mills and Salt Depôt, respectively. Institutions.

PROTECTION.

179. Plans and estimates for the proposed construction of the fifth Central Jail at Jhelum and the conversion of the Lyallpur Jail into a Borstal Jail were received. Owing to increased war rates, the former work, though still urgently needed, cannot, at the present juncture, be taken up. The second proposal is now not necessary as Government has sanctioned the acquisition of 50 acres of land adjoining the present Borstal Jail for experimental farming purposes with the promise of an Agricultural Staff. The building of a special jail for tubercular prisoners is still under consideration, and steps have been taken to select a suitable site.

Military labour and War work.

180. During the year the two Punjab Jail Corps, raised in 1916 for labour in Mesopotamia, have been kept at full strength by drafts amounting to 2,111 men, making in all a total of 4,538 up to the end of the year. Faridkot, Kapurthala and Bahawalpur Darbars have contributed 14, 35, and 15 prisoners, respectively, from their State Jails, for service with the above Corps.

181. Daily labour has been supplied for several months to the arsenals at Rawalpindi and Ferozepore, and to grass farms and dairies at the above stations, as well as at Sialkot, and to meet other requirements for Military buildings. These demands amounted to fully 1,000 men daily.

Accommodation.

182. The total accommodation decreased from 14,804 to 14,699 owing to new measurements being made of Montgomery and Rawalpindi Jails. Most of the jails have been below strength, but at certain of them there has been overcrowding, according to "Accommodation," due to concentration of prisoners for Military purposes. This overcrowding is in no sense real as the excess numbers have been accommodated in tents and workshops.

Admissions.

183. The number of admissions (17,222) shows a decrease of 16·06 per cent. and the average daily population (14,454) a decrease of 15·51 per cent. This diminution is incidental to the War. The number of convicts remaining at the end of the year of those who received sentence in the North-West Frontier Province was 1,507.

184. Those sentenced to transportation but still remaining in the Punjab numbered 739 against 938 in 1916.

Juveniles and Juvenile adults.

185. Forty-two juveniles were sentenced to imprisonment as compared with 60 in 1916.

186. The work of striving to reform the young criminals confined in the Borstal Central Jail has steadily advanced. Under orders of Government the Jailor was deputed to visit similar institutions in Bareilly and Alipur, and much useful information was gained thereby. The religion of the convicts is being carefully attended to, and arrangements have been made for preachers of different sects to visit the jail on Sundays to preach to the prisoners. Good effects produced by these measures are already noticeable. The labour required for the Dhariwal Camp Jail has been met entirely by this jail and has proved a marked success. Ambulance classes have been continued and with the exception of one lad, all (102) who have appeared for the First Aid Examination have passed. The scheme of extension of conditional release to specially selected prisoners of lengthy unexpired terms has been in operation during the year and has proved advantageous. Fifty acres of land adjoining the jail are being taken up for teaching the elements of agriculture to prisoners of the agricultural class, who form about 60 per cent. of the jail population. A scheme for an expert staff of teachers, both educational and instructional, has been approved and sanctioned by Government. Much war work is being done in this jail in the manufacture of various articles for the Military authorities.

Under-trials.

187. The number of under-trials admitted during the year fell from 21,168 to 19,669, or 1,499 less than in 1916. The average period of detention was much the same as in previous years.

Escapes.

188. Nine prisoners escaped during the year against 18 last year, and 7 of them were recaptured. In all but one, the escapes occurred from outside gangs.

Attempts to escape.

189. A serious attempt at escape occurred at Montgomery during the hour of midday rest on the 29th June. To facilitate resumption of

work the prisoners were kept in the factories. Through the neglect of various officials, a number of prisoners were able to congregate in the compound of one of the workshops, where they organized their arrangements for escape. Fortunately, their doings were observed by certain persons, who speedily frustrated their designs by promptly sounding the alarm.

Punishments.

190. Fetters were imposed for safe custody in 206 cases more than in last year. This precaution was due to the presence of a large number of long-term and dangerous men.

Staff.

191. With certain exceptions the conduct and work of the subordinate and warder staffs have been satisfactory.

Discipline.

192. A further fall in the number of jail offences shows that the progressive improvement in discipline, commented on in the reports for the last two years, has been maintained.

Expenditure.

193. There was a decrease in expenditure on guarding and maintenance from Rs. 13,67,711 in 1916 to Rs. 12,42,290, a difference of Rs. 1,25,421. This is due to diminished population, drafts for Mesopotamia, and reduction in the number of District Jails. The average cost of each prisoner's maintenance increased from Rs. 80-11-9 to Rs. 86-14-4 owing to the fact that reduction of establishment could not equalize the decrease in the number of prisoners.

Industries.

194. The daily average number of convicts sentenced to labour decreased from 15,182 to 12,718. After excluding those unfit from various causes, and those employed on maintenance purposes, there remained 4,189 prisoners available for industrial work. A sum of Rs. 42,0.1 was realized by hire of convicts for out-door work to the Military authorities.

195. The net profits from Jail Factories show a decrease of Rs. 1,51,038 this year, and this is due mainly to the following causes:—

(*i*) Outstandings amounting to nearly one lakh of rupees at the close of the year.

(*ii*) Large stocks on hand at the end of the year.

(*iii*) Decrease in jail population.

(*iv*) Conversion of certain jails into sub-jails.

For similar reasons the average earnings per head fell from Rs. 15-9-0 to Rs. 6-12-0.

Health.

196. The number of prisoners admitted to hospital increased from 13,072 to 14,299, due no doubt to the heavy rains during the year. The average number of sick fell from 556 in 1916 to 545 this year, but the death rate increased from 20·32 to 26·66. There were 5,459 admissions and 14 deaths against 4,642 admissions and 13 deaths in 1916, from malaria, the excessive rainfall being the cause of this increase. Cholera was again absent from the jails. There were, however, two cases of plague. By means of active measures the disease was at once stamped out.

197. There were 279 admissions and 91 deaths from tuberculosis against 164 and 74 in 1916. The increase is due to the want of early diagnosis and general lack of knowledge in methods of disinfection displayed by certain Medical Officers. Measures are being taken to overcome this serious condition of affairs.

22.—Civil Justice.

Institutions

198. The total number of original civil suits instituted in all courts was 202,893 against 194,864 in the preceding year, an increase of 8,029, of which 6,403 were money suits.

199. Various causes for the fluctuations in the number of suits instituted in different parts of the province have been noted. It is impossible to estimate with accuracy the effect of any of these causes individually or to balance one against another. Thus, on the one hand, owing to an active recruiting campaign, creditors may hasten to bring claims before the departure of recruits while, on the other hand, those absent on active service cannot be sued.

200. The total number of suits for money or moveable property brought by bankers and shopkeepers against agriculturists rose from 69,721 to 73,558.

201. Although there was an increase of 6,403 in the total number of suits for money or moveable property, the comparative increase in other forms of litigation was slightly greater and the percentage of suits for money and moveable property fell accordingly from 84·9 to 84·7.

202. There was a slight decrease in suits for possession or recovery of immoveable property other than pre-emption suits, but there was an increase of 542 in suits to establish a right to pre-emption, of 124 in suits for specific relief, and of 1,099 in "other suits."

Insolvency Act.

203. Applications for a declaration of insolvency under Act III of 1907 rose from 2,239 to 2,976 or, including those pending from the previous year, from 3,160 to 3,848 ; of these 1,198 were withdrawn or not prosecuted, against 932 in the previous year; but the number of applications allowed rose from 1,066 to 1,429. Over 98 per cent. of the 2,976 applications made during the year were presented by debtors. The Hon'ble Judges in dealing with the exceptional rise in the figures for the Ferozepore and Gujranwala Districts have recently made certain recommendations to Government in connection with this admittedly unsatisfactory Act. It appears that the agriculturist tends to abuse the Act as soon as he realises the loophole which it has left to the *mala fide* bankrupt.

Value of suits.

204. The value of suits instituted rose from Rs. 3,52,04,216 to Rs. 3,98,31,320, and the average value rose from Rs. 180 to Rs. 196. There was a slight decrease in the number of all suits not exceeding Rs. 50 in value, but an increase in all suits of higher value. While money suits participated in the general decrease of all suits not exceeding Rs. 50 money suits not exceeding Rs. 100 in value rose by 3,281 to 44,099, and those not exceeding Rs. 500 in value by 4,691 to 45,146. These figures may be taken as a true index of the increasing wealth of the Province.

Duration of suits.

205. The average duration of contested suits was 80 days in the year under report and of uncontested suits 40 days, figures which compare favourably with those of other provinces.

Process serving.

206. An improvement in process serving has been achieved by instructions to subordinate courts that substituted service by a process server is not to be effected without a special order from the court issuing the process. It is no longer left to the discretion of the process server to decide whether he shall effect personal or substituted service. In the absence of special orders to the contrary he has to effect service personally, returning, if necessary, again and again to the town or village to effect this object. In addition much closer supervision by Senior Subordinate Judges of the work of process servers is now demanded. The result has been a great increase in personal service of process and a corresponding increase in disposals by the Courts.

Panchayat Act.

207. The Panchayat Act has become a dead letter, even in the few districts where it had shown some signs of becoming popular, since it has become generally known that the *panchayats* have no authority to take up cases referred to them by one party without the consent of the other. Last year the Lieutenant-Governor, after an examination of the results attained, reluctantly came to the conclusion that the Act in its present form had proved a failure owing mainly to the consent of both parties being necessary, and the Hon'ble Judges were consulted in regard to a suggestion that *panchayats* should be replaced by benches of two honorary civil judges with the powers of a munsif of the third class sitting at the headquarters of tahsils and having powers to receive and decide plaints direct and without the intervention of the Munsif. The Hon'ble Judges, however, have recorded their opinion that the time is not ripe for this proposal and consider that the Panchayat Act should be repealed. There is thus no clear course of constructive policy indicated. The principle underlying the Panchayat Act is undoubtedly a sound one and a failure in the first experiment should not be allowed to lead to an abandonment of the principle. It is therefore intended that a committee

composed of members of the Provincial Legislative Council should be formed in order to try to discover some satisfactory solution of the difficulty.

Liquidation proceedings.

208. Apart from banks and companies in purely voluntary liquidation there were 38 banks and companies in official liquidation under the supervision of a court. Most of these are in the hands of a District Judge with head-quarters at Lahore who is endeavouring to expedite proceedings. The liquidation proceedings in connection with the People's and Amritsar Banks were transferred to the Chief Court during the year.

Accessibility to revenue records.

209. Government has now sanctioned the appointment of a Special Kanungo in every district except Simla to assist the Civil Courts in the elucidation of revenue records, and necessary instructions for the employment of this official have been issued to subordinate courts. The system has proved a success in its experimental stage.

Stenographers.

210. Now that stenographers have been sanctioned for a number of District Judges, it is possible in those districts to decide a much larger number of civil appeals than was formerly the case. It is hoped that the system will in time be extended to all districts.

Chief Court.

211. In consequence of the congestion of civil appellate work in the Chief Court it takes about three years for a first or second appeal to come up for hearing by a Division Bench ; unless the number of Judges is increased, much improvement cannot be expected for some time to come.

23.—Registration.

General business.

212. Documents, where registration is compulsory, increased by 1 per cent. in number and 7 per cent. in value as compared with the preceding year. The most noticeable feature of the year, so far as compulsory registration is concerned, was an increase of 7 per cent. in the number and 27 per cent. in the value of instruments of sale and exchange. The increase is partly due to the collapse of many buildings during the heavy rains of the year and the consequent increase in transactions relating to house property.

213. Optional registrations affecting immoveable property (2,922) decreased by 21 per cent. in number and by 61 per cent. in value as compared with the preceding year. In 1916 a single award in Gujranwala raised the total by 10 lakhs and the decrease has, apart from that award, been about 11 per cent

214. The variations in optional registrations affecting moveable property, namely, a decrease of 6 per cent. in number and an increase of 3 per cent. in value, call for no particular comment.

Land Alienation Act.

215. The provisions of the Land Alienation Act are generally well understood, and due vigilance is exercised to prevent their evasion. Mortgages disguised as leases, however, still occasionally escape detection Direct contravention of the provisions of the Land Alienation Act is now very rare, but it is a common practice for money-lenders to have mortgages executed in favour of agriculturists and to take bonds from the latter.

Income and expenditure.

216. There was an increase of 3 per cent. in income owing to an increase in the value of documents registered, and a decrease of 1 per cent. in expenditure owing chiefly to the fact that the posts of some Sub-Registrars remained temporarily vacant on account of leave or delays in filling up vacancies. The net profit on the operations of the Department was Rs. 2,38,289 as against Rs. 2,25,276 in the preceding year.

23-A.—Legal Affairs of Government in the year 1917.

217. The number of references for opinion disposed of by the Legal Remembrancer was 955 as compared with 1,041 in 1916 and 952 in 1915.

218. The Secretary of State was plaintiff in 14 original suits during the year. Of these, 4 were decided in favour of Government, 1 was withdrawn, whilst 9 remained pending at the close of the year. Of the 4 cases decided in favour of Government, 1 was for possession of land and 3 for recovery of money. The total amount involved was Rs. 19,217. The Secretary of State was defendant in 85 original actions, including land acquisition references. Of the 9 land acquisition cases,

6 were decided and 3 remained pending. The Collector's award was upheld in one and enhanced in the 5 that were decided. Of the other 76 civil suits, 25 were decided in favour of and 14 against Government, 2 were compromised and 35 remained pending at the close of the year.

219. The total amount involved was on account of —

		Rs.	A.	P.
(*a*)	Land Acquisition references ...	1,69,261	11	0
(*b*)	Other cases	3,46,205	9	11
	Total ...	5,15,467	4	11

220. In class (*b*) above, the total amount claimed in decided cases was Rs. 4,95,319 out of which only the small sum of Rs. 4,477 (including costs) was decreed against Government, whilst Rs. 3,107 was awarded to Government on account of costs in cases in which the plaintiffs remained unsuccessful.

221. The Secretary of State was appellant in 22 and respondent in 36 appeals. Of these, 28 were decided in favour of and 10 against Government, the rest remaining pending at the close of the year. Only one revision case was instituted on behalf of the Secretary of State which remained pending at the close of the year; whilst the five appeals filed on behalf of Government were successful.

222. Government Law Officers appeared in one original criminal trial in the Chief Court which was decided in favour of the Crown and in 36 original trials in subordinate courts. Of these, 1 was withdrawn, 26 decided in favour of and 6 against Government, while 3 remained pending. Out of 1,176 Criminal Appeals in the Chief Court 968 were decided in favour of and 208 against the Crown. In Subordinate Courts 3 appeals were successfully preferred. The Crown was also successful in 125 out of 230 applications for revision, 35 being decided against it. There were 114 miscellaneous cases, all of which were decided in favour of the Crown.

24.—District and Local Boards.

223. The constitution of district boards has undergone no change during the year. Excluding Simla, which has no board in the ordinary sense, there remain 10 districts in the west of the Province where the system of election has not yet been accepted. Government has been steadily pressing for its introduction, but local non-official opinion is still strongly opposed to a system which it fears would aggravate feuds and factions in a tract where these are already prevalent. In 8 out of the 15 district boards in which the election system prevails fresh general elections were held during the past year. One hundred and seventy-five seats fell vacant, out of which 27 vacancies were contested while as many as 14 seats, of which Rohtak accounted for no less than 10, had to be filled by nomination in the absence of any candidate for election. The reports contain varying accounts of the degree of enthusiasm displayed at these elections. In one district 5 vacancies were contested out of 14, the contests were keen and nearly two-thirds of the electorate concerned voted; in another district the only contest which appears to have aroused any fervour appears to have been due to sectarian partisanship; in another district no interest at all was taken in the elections.

224. One explanation given of the frequent lack of interest in elections is that, as membership of the boards is highly valued, only the best and most representative elements, opposition to which could not hope to be successful, are able to secure seats. This explanation, which certainly contains a basis of truth, receives support from the fact that a rival candidate often decides shortly before the poll to withdraw and to leave the vacancy uncontested. At the same time the occasional occurrence of vacancies for which no candidate is forthcoming and which have accordingly to be filled by nomination affords evidence for the opinion expressed in last year's report that the attitude of the rural mind towards election, as now conducted, is one of apathy or distrust. It is possible that in some cases an unsuitable arrangement of electoral circles is responsible. Since the close of the year it has been decided in a majority of districts to increase

considerably the elected and non-official element on the boards and at the same time substantially reduce the number of officials. An opportunity of revising the existing electoral circles will thus be afforded.

225. In the hope that it would be found possible to induce some of the more progressive districts to accept, experimentally at least, non-officials as chairmen of the boards all Commissioners were addressed towards the close of the year and asked to obtain the views of the boards in their respective divisions. But the non-official members of the boards in practically every instance showed a unanimous desire to retain the present arrangement under which the Deputy Commissioner is elected or appointed chairman. Even a suggestion that the official element in the boards might be reduced by the elimination of Tahsildars met with scant support. It is hoped that ere long the adoption of a more self-reliant policy will commend itself to non-official members of at least some of the more progressive boards.

226. Many reports comment favourably on the increasing interest taken by members in the proceedings of the board and on the value of the discussions which take place. There is less unanimity, however, concerning the value of sub-committees. Although most reports indicate that useful work is done by them and the number of sub-committees as well as the number of subjects assigned to them has multiplied during the year, there remain a few districts in which they have not yet proved their efficacy.

227. A satisfactory feature of the past year has been the raising of the local rate to its maximum in no less than 9 districts, with the result that there now remain only 5 districts in the Province in which the maximum rate is not in force.

228. With the local rate raised to its maximum and no early re-assessment of land revenue in prospect many boards must now face the alternatives of new forms of taxation or the more systematic exploitation of existing resources. Increased attention is being paid to arboriculture, to agricultural farms and even to the humble cattle-pound which in many districts yields no small profit to the board. For instance, in Amritsar an income of Rs. 4,492 was derived from cattle-pounds, while the expenditure amounted only to Rs. 1,371. In arboriculture the boards possess an asset of great potentialities, provided it is developed on scientific lines. Satisfactory progress in this direction is manifested in Sialkot where the operations resulted in a nett profit of over Rs. 34,000.

229. The past year was the first in which the system of consolidated grants given by Government to meet the normal variations between income and necessary expenditure was fully established. These grants replace the previous grants for particular services and they are supplemented by development grants allotted by the Commissioner for expenditure in promoting the general development of each district. There is no doubt that, by the introduction of this system, all boards have gained in financial independence and in an increased sense of responsibility towards the problem of providing for the needs of the future. Moreover, the distribution of the money has been placed on a much more equitable basis.

230. The gross income of district boards was Rs. 83,16,600 which exceeded by over $4\frac{3}{4}$ lakhs that of the previous year and was the highest yet attained. Only $1\frac{1}{2}$ lakhs of the increase was accounted for by the local rate, the enhancements in the rate not having had their full effect during the year. The total expenditure of the district boards, after deducting Rs. 65,000 invested in the War Loan by the Rohtak and Jhelum Boards and erroneously classified by them as expenditure, fell to Rs. 71,06,400, being nearly $5\frac{1}{2}$ lakhs less than in the preceding year.

231. Receipts under the head "Education" amounted to Rs. 16,70,000, an increase of about three-quarters of a lakh over last year's figure. Expenditure also rose by one-and-a-quarter lakh to Rs. 25,37,000, the nett expenditure being more than half a lakh greater than in the previous year.

232. Fair progress has been made in the opening of new schools, but it has been found in many districts that a supply of trained teachers and the proper equipment of existing schools are more urgently needed than the opening of new ones.

233. In the Rawalpindi Division all the boards have introduced a system of incremental salaries for their teachers and at the same time have improved the existing rates of pay, while in Shahpur attention is being concentrated on the replacement of hired buildings and the provision of adequate furniture. In Lyallpur the district board workshop provides schools with furniture of better quality than is obtainable at the same price in the ordinary market, and this example is one which other boards would do well to imitate. Female education is receiving attention in many districts. The Attock Board is undertaking a special survey of possibilities in this connection, but the lack of suitable teachers is a factor which appears to deter most boards from drawing up a systematic programme.

234. Income under the head "Medical" rose from Rs. 1,07,510 to Rs. 1,10,875 in spite of a decline of over Rs. 6,000 in hospital and dispensary receipts—a disheartening feature in view of the efforts made to popularize the charging of fees from those who can afford them. Expenditure which had fallen last year from Rs. 7,84,047 to Rs. 7,76,901, owing principally to a reduction in plague charges, increased to Rs. 7,86,998,—a natural result in a year of widespread malarial and other epidemics. The conditions of the year were, in fact, such as to tax the available medical resources of the Province in an unusual degree, and many new projects had to be deferred in the interests of more immediate requirements such as the liberal distribution of quinine and the equipment of temporary itinerating dispensaries.

235. The interest taken by boards in the improvement of agriculture grows year by year, and many districts report the formation of Agricultural Associations working in close co-operation with the board and the holding of exhibitions of improved implements on the occasion of important fairs. A record number of bulls, namely, 206, was supplied by the Hissar Farm to district boards during the year, in addition to which bulls of the Dhanni and Dajal breeds were also purchased by some boards. These large purchases indicate substantial progress in cattle-breeding, and many districts report that much keenness is now displayed by zemindars in obtaining good animals.

236. It is natural that the expenditure of the boards on civil works should have markedly declined during the past year. Nearly all reports allude to the high cost of material and labour and the consequent postponement of all building work other than necessary repairs. Stone metalling for roads has also been difficult to obtain owing to the lack of Railway transport. The result is seen in the fall of expenditure on buildings from Rs. 8,05,486 to Rs. 5,67,545 and on communications from Rs. 18,91,650 to Rs. 14,62,447, these being in both cases the lowest figures of the past five years.

237. Among other enterprises of district boards during the year the interesting entry of two boards into the arena of journalism should not pass without mention. The *Jullundur Gazette* is a monthly periodical financed by the Jullundur District Board and edited by the Chairman with the assistance of the Secretary. It has attained a circulation of 1,800. The District Board *Bulletin* of Lyallpur is published weekly for circulation to members and in schools. Both these newspapers do excellent service in the distribution of reliable news and the suppression of false rumours, and much credit is due to the initiators. Another satisfactory feature of the year is the liberal support given by district boards to the War Loan. Many of the reports are full and interesting, and nearly all afford signs that the members of boards and the public whom they represent are now showing a more lively interest in the problems of rural economy and rural administration.

25.—Municipal Administration.

238. There was no change in the number (100) of municipalities during the year 1917-18, but the constitution of 4 new notified areas at Nurpur, Jakhal, Chuharkana and Dhariwal has brought the total number of these bodies to 104. In accordance with the policy of extending the elective system to as many as possible of the municipalities where it is not yet in force, the circumstances of the 30 committees concerned were brought under review during the year, with the result that, in spite of local apathy and in some cases misgiving as to the possible consequences, it has been decided to introduce or re-introduce election into 8 more municipalities.

Where the system of election already obtains, it is seldom, however, that it evokes much interest, and in the majority of cases vacancies are uncontested. In the Jullundur Division only 6 vacancies were contested out of 45, in the Ambala Division 4 out of 33 and in the Multan Division 6 out of 32. The Lahore Division shows somewhat better figures with 9 vacancies contested out of 21. In the minor municipalities elections are generally reported to be conducted without any understanding of the responsibilities attaching to the franchise. Voters are indifferent or ignorant of the effect of their votes on the administration of their towns. They are swayed by personal motives or by the influence of faction. Similar criticisms could doubtless be levelled at elections in small towns in more advanced countries, but they are quoted here as indicating the most serious obstacle to the progress of local self-government and the wider constitutional changes which are now in contemplation. New rules have been passed during the year which provide among other matters for simultaneous elections. It is hoped that these may help to effect some cure for the present apathy by presenting voters through the medium of a general election with an opportunity for a comprehensive review of important questions of municipal administration and teaching them to test the merits of candidates by their attitude towards such questions.

239. In regard to the general attitude of members towards municipal administration, committees are roughly divisible into three broad classes, namely, those in which, owing to the harmony prevailing between members, business is expeditiously and efficiently conducted and initiative and a progressive spirit is often displayed; secondly, those in which public business is hampered because party feelings are rife and personal interests predominate; and, thirdly, those in which the members are so apathetic and dependent on official guidance that little is ever achieved without official stimulus. It is satisfactory that a considerable number of committees can be classed in the first category, though the municipalities in which lethargy or self-interest prevail are still in the majority. Sub-committees are on the whole reported to be doing good work, and there is no doubt that conscientious work on such committees furnishes members with an admirable training in the discharge of civic responsibilities.

240. To the performance of their statutory functions most committees pay on the whole adequate attention. More attention is being paid to the control of food and milk and many useful bye-laws have been passed during the year especially by the municipalities of the Lahore Division. The publication by Government during the year of sets of model bye-laws appears to have encouraged committees to take action in this direction.

241. The number of municipalities possessing non-official chairmen was 14, 2 of them being nominated. The increase in the number of non-official chairmen has the hearty approval of Government, while in several cases, where the Deputy Commissioner or other official is still chairman, the policy is being adopted by him of intervening less and less in municipal affairs. The reports of Commissioners indicate that excellent work is being done by many non-official gentlemen as Presidents, Vice-Presidents or Honorary Secretaries of municipal and notified area committees. In order to alleviate the distress in towns caused by high prices, many committees opened shops for the sale of cheap grain and salt to the poorer classes, and the management of these afforded individual members the opportunity of displaying much public spirit and administrative ability.

TAXATION.

242. Income from taxation during the year rose by more than 2¼ lakhs to Rs. 47,24,000 following on a rise of more than 2 lakhs in the previous year, while the incidence of taxation rose from Rs. 2-12-6 per head to Rs. 2-14-8. Octroi receipts at Rs. 41,81,000 account for nearly 2 lakhs of the increase. During the year an Act (IV of 1918) was passed providing facilities for the imposition of a terminal tax in municipalities in the Punjab, and as the Railway authorities have consented to undertake collection on behalf of municipalities in return for a percentage of the receipts by way of commission, it is hoped that all municipalities will now apply themselves seriously to the problem of considering whether this

form of taxation cannot be substituted for octroi. Government is contemplating the provision of expert assistance in the matter should a sufficient number of committees desire to avail themselves of it.

26.—Military (Indian Defence Force).

243. The year under review brought with it important changes by the passing of Act III of 1917 which brought into being the Indian Defence Force on the 1st April 1917, thereby abolishing the old Indian Volunteer Force which had been in existence for a period of sixty years. The old Volunteer Force formed the nucleus for the new Indian Defence Force on to which it was grafted, but as the new Act made it compulsory for all British-born subjects to belong to the Indian Defence Force, unless medically unfit, exempted, or overage, many individuals who had not been interested in or belonged to the Volunteer Force, were enrolled under the rules of the Indian Defence Force.

244. There were one mounted and three unmounted Indian Defence Force units in the Province, namely,—

The 5th Punjab Light Horse, the 4th Simla Rifles, the 3rd Punjab Rifles and the 1/24th North-Western Railway Battalion, Lahore.

245. The 5th Punjab Light Horse contributed another 56 members to the Indian Army Reserve of Officers during 1917 and 5 to the commissioned ranks of the Regular Army in England. There are no less than 112 members of this unit serving in the Indian Army Reserve of Officers, the majority of whom are on service abroad.

246. The 4th Simla Rifles has at present a total strength on active service of over 200. The majority of these have obtained Commissions in the Indian Army Reserve of Officers, while some were appointed to Sergeantships in the Supply and Transport Corps and to civil appointments. The number of men in the commissioned ranks is 143 and in non-commissioned ranks 36. The number serving overseas in Mesopotamia, Egypt, etc., is 24.

247. The North-Western Railway Battalion has contributed a considerable number of men for active duty in the various theatres of the war. Six members of this corps have obtained commissions in the British Army since the commencement of the war and 32 in the Indian Army Reserve of Officers.

248. Under the old Volunteer system the strength of the Punjab Volunteer Rifles aggregated 1,306 all ranks on 31st March 1917. The new Act introducing compulsion was expected to increase this number by the enrolment of all those who were non-volunteers. This anticipation, however, was not fulfilled as not only did many who were keen Volunteers have to resign through medical unfitness, but many more were exempted from service; further the new Act did not admit of individuals who were already serving in various branches of the regular forces belonging to the Indian Defence Force. The actual strength of the battalion fell during the year under report to 822 of all ranks on the 31st March 1918.

249. The battalion found 3 officers and 51 non-commissioned officers and men for service with the general service battalion at Poona, which was raised at that station and Madras for the purpose of relieving other units for service at the front. During the year the non-commissioned officers and men of the Machine Gun section, which was sent out to East Africa in September 1914, returned to India. Those who had completed their term of engagement were discharged from military service and resumed their civil duties, while the others who had been sent out as reinforcements and had not completed their service were posted to the Machine Gun centre at Mhow. At the close of the year under report the numbers of the Indian Army Reserve of Officers from the battalion had risen to 94 and the total on active service to 324.

250. An attempt was made during the year to recruit a battalion 1,000 strong from the Indian urban population of the Province for purely local service in the non-European section of the Indian Defence Force, but the response was very disappointing, only 150 fit men being enrolled. The training of these men was completed after the close of the year.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the Operations of the Department of Agriculture, Punjab, for the year ending 30th June 1918.
(2) Annual Report of the Punjab Veterinary College, Civil Veterinary Department, Punjab, and the Government Cattle Farm, Hissar, for the year 1917-18.
(3) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1917.
(4) Report on the working of Co-operative Societies for the year ending 31st July 1918.

Fisheries.—Report on the Department of Fisheries, Punjab, for the period 1st June 1917 to 31st May 1918.

Weather and Crops.—(1) Report on the Weather of the Punjab for the year 1917-18.
(2) Punjab Season and Crops Report for 1917-18.

Horticulture.—Report on the Lawrence Gardens, Lahore, for the year 1917-18.

Forests.—(1) Progress Report on Forest Administration in the Punjab for 1917-18.
(2) Progress Report on Arboriculture in the Punjab for the triennial period 1914-15 to 1916-17.
(3) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1917-18.
(4) Land Revenue Report, as above.

Manufactures.—Report on the working of the Factories Act in the Punjab during the yaer 1917.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the year 1917-18.
(2) Report on the External Land Trade of the Punjab for the year 1917-18.
(3) Report on the Joint Stock Companies in the Punjab for the year 1917-18.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1917-18.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1917-18.
(2) Land Revenue Report, as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—Statistical Abstract for British India, Volume I, Commercial Statistics.

Forests.—Statistical Abstract for British India, Volume II, Financial Statistics.

Crops.—(1) Agricultural Statistics of India, Volume I, Tables II and III.
(2) Estimate of Area and Yield of certain principal Crops in India.
(3) Prices and Wages in India.
(4) Variations in Indian Price Levels.

Mines and Quarries.—(1) Statistical Abstract for British India, Volume I, Commercial Statistics.
(2) Records of the Geological Survey of India, Volume XLVII, Part 3.
(3) Report of the Chief Inspector of Mines in India.

Manufactures.—Statistical Abstract for British India, Volume I, Commercial Statistics.

Trade.—(1) Inland Trade (Rail and River borne) of India.
(2) Statistical Abstracts for British India, Volume I, Commercial Statistics.

Railways.—Administration Report on Railways in India for the year 1917-18.

Irrigation.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

PRODUCTION AND DISTRIBUTION.

27.—Agriculture.

General.

251. In May last the Department of Agriculture and Industry was divided under two Directors, Mr. Townsend retaining charge of Industries and additional duties of the directorship of Civil Supplies, while Mr. Joseph was appointed Director of Agriculture.

252. Mr. Roberts, Principal of the Lyallpur College, was on deputation with the Indian Cotton Committee for about 7 months, when Mr. Wilsdon, the Agricultural Chemist, acted for him. Three new assistant professors and three demonstrators were added to the staff of the college owing to its affiliation to the University.

The Lyallpur College.

253. The 1917-18 session opened with 82 students on the roll, 38 in the first year, selected from among 150 applicants, 34 in the second year and 4 and 6 in the third and fourth years. The Rural Economy Class for Revenue and Irrigation Officers could not be held owing to the Principal's absence, but the six months' Vernacular Course was held as usual, while another new class for selected Vernacular Middle School teachers, who may be able on their return to their schools to impart something of the spirit of modern agricultural science to their pupils, was opened. This is an interesting experiment and gives promise of useful results. A second Vernacular Class will be started at Gurdaspur as soon as more staff is available, and meantime arrangements are being made for erecting a *Serai* there, on which accommodation the new Vernacular Class students will have first claim while the building will also provide much-needed accommodation for visitors to the experimental farm.

Experiment and Research.

254. Various important chemical problems continued to receive attention and arrangements are now in train to start reclamation work on "Bara" land near Montgomery. In the domain of Economic Botany important work has been done on wheats and cottons. In wheats there is a possibility that a new type 8 A, a bearded wheat with good hard amber grain, will oust Punjab 11, at present the most popular variety in the Canal Colonies, but definitive experiments are still to be made. Further, the Economic Botanist's work on ear-cockle in wheat has brought him to the conclusion that clean seed is the complete remedy to eradicate the disease which has been doing great damage to the crop in various places.

Implements, Demonstration work and Well-boring.

255. (*a*) *Implements.*—Owing to the restrictions on import of machinery and to the further advance in prices, only 725 imported implements were sold as against 1,863 in the year preceding the year under report. On the other hand, 306 simple "Bar harrows," manufactured at Lyallpur and sold below cost price, have been disposed of as also 132 Lyallpur drills and 59 Lyallpur hoes. Much useful work has been done by the agricultural staff in designing new implements.

256. (*b*) *Demonstration.*—A useful advance is the provision of small demonstration plots which are being started in Gurdaspur and Montgomery to be worked through co-operative credit societies by the zamindars themselves under the guidance of the agricultural assistant of the district. Successful adoption of new methods by the zamindar himself carries conviction to the mind of his brother farmers quicker than their demonstration on a Government Farm. Similarly short loans of agricultural implements to the people themselves are more productive of results than demonstration at fairs, though the latter method was also adopted. In the Gurdaspur circle about 614 implements were lent out in the year. Another method of popularising these novelties has been adopted in sending itinerating parties through the villages to work them.

257. (*c*) *Well-boring.*—Here again advancing prices, increasing difficulty of obtaining material, restriction of goods traffic and the demands of Mesopotamia have all contributed to a reduction of well work, but it is satisfactory that the percentage of success rose to 74·4, or 4·1 higher than in the previous year.

Storage and Distribution of Seed, Posting of Cotton Prices and Cotton Auctions.

Cotton.

258. The figures in acres under 4 F American cotton for the year under report as compared with the year immediately preceding it are as follows:—

	1917.	*1918.*
Lower Chenab Canal Colony ...	120,000	190,000
Lower Jhelum „ „ ...	11,500	16,000
Lower Bari Doab „ „ ...	80,000	173,000
Chunian Colony	3,500	10,000
Upper Jhelum Canal Colony		1,000
Total ...	215,000	390,000

259. Of the above it is estimated that 80 per cent. is practically pure. The growth on the Lower Bari Doab Colony is especially remarkable. Bombay cotton prices were posted at 18 markets. The information thus published appears to have facilitated the securing of full value of the crop. Twelve cotton auctions were held by the department and two by private societies at which about 120,000 maunds cotton, valued at roughly £150,000, was sold. The inauguration of private sales is a most gratifying feature.

Wheat

260. The area under pure Punjab 11 is estimated to have more than doubled itself as the following figures in acres will show:—

	1917.	*1918.*
Lower Chenab Canal Colony ...	60,000	100,000
Lower Jhelum „ „ ...	22,000	45,000
Upper Bari Doab „ „ ...	15,000	50,000
Upper Jhelum „ „ ...	...	1,480
Total ...	97,000	196,480

261. It is estimated that at least another 750,000 acres with not more than 10 per cent. impurity were grown.

262. Pusa 12 wheat continues to be a most popular wheat in the Sialkot, Hoshiarpur and Jullundur Districts. For the next year a lakh-and-a-half rupees has been advanced for purchase and distribution of seed through the Department.

Sericulture.

263. Sericultural work has further expanded, 921 ozs. of seed having been distributed by the Department alone as against 700 last year; owing to the high prices the silk now fetches, the rearer realised on an average Rs. 21-1-0 against Rs. 15-11-0 per oz. in the preceding year. The improvement of sericulture as a cottage industry depends to a great extent on the provision of mulberry towards which but very slow progress has been made. The whole question is, however, receiving consideration and the provision of a separate staff for the expansion of this line of work has been proposed.

Co-operative Societies.

264. The year has been essentially one of expansion and experiment, but the work of consolidation has also been vigorously pushed forward. The number of Government Inspectors was increased by 3 to 22 and, with an adequate staff well trained, it has been possible to bring about marked improvement. Many more unsatisfactory members were expelled and many of the old loans were properly dealt with. In spite of a kharif, spoiled by excessive downpour and a rabi seriously handicapped by the failure of the winter rains, nearly 51 lakhs of rupees were collected as shares, principal and interest.

Central Institutions.

265. What will probably prove to be the outstanding feature of the year was the formation and registration of the Punjab Co-operative Union, Limited. This is a combination of all Central Banks and Banking Unions which elect representatives in proportion to the number of primary

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societies affiliated to them. It thus represents the whole body of co-operators in the Province and though, at first, its business will be to administer the audit fund, it will probably develop into a factor of importance in the rural development of the Punjab.

266. A new Central Bank was opened at Murree and a Central Weavers' Co-operative Stores was successfully founded. In spite of the war loan campaign transactions between Central Banks and societies increased by 10·8 lakhs to 33·5 lakhs. The Central Banks now own as shares and reserve fund 26·5 per cent. of their total liabilities.

267. Two new unions were formed. The unions are now, with few exceptions, placing all their profits to reserve. On the whole the central institutions have done a good year's work and are rapidly increasing their financial stability.

Agricultural Societies.

268. Six hundred and forty-two new societies were registered during the year and 122 bad societies were cancelled, leaving a net increase of 520. Two new types of society have been introduced, one having share capital returnable after ten years, but profits indivisible for ever, and the other a pure Raiffeisen society, with no share capital and with profits indivisible. Some old societies also have agreed not to divide profits and in other directions the evil of profit seeking is being eradicated. The total paid-up share capital has not increased much, as though 6 lakhs more were paid up, $2\frac{1}{2}$ lakhs, representing the shares of expelled members, were transferred to deposit or returned, and $1\frac{1}{2}$ lakhs were returned to members of 49 societies which had completed their first ten years. The reserve fund has increased by 5·4 lakhs to 37·4 lakhs, and 8·6 lakhs were earned during the year. The capital owned by societies is over 88 lakhs and forms 64 per cent. of their working capital. The net indebtedness of members to depositors, etc., has declined from 43 to 37 lakhs. The members are thus rapidly becoming self-supporting so far as capital is concerned.

269. Of 33 lakhs advanced to members, 23 per cent. was for cattle. This brings out once more the great importance of developing some system of thrift whereby the people can be encouraged to save in order to meet these inevitable expenses. Cattle insurance is the obvious method and attempts are being made to introduce this. Altogether 31·5 per cent. of the sum advanced (or 11 lakhs) was for objects for which *takkavi* loans could have been obtained from Government under the Agriculturists Loans Act. Repayment of old debt continues to be a prominent cause of borrowing. The most frequently recurring object of loans is land revenue; this is probably due to the desire of the people to gain time to sell their crop to the best advantage. Nearly 32·5 lakhs principal was repaid during the year.

Co-operation in agriculture.

270. The year saw much progress achieved in securing closer association with the Agricultural Department. Ten of the staff underwent a six months' course in practical agriculture, and over 100 visits were paid by the staff to the farms at Lyallpur and Gurdaspur. All the visitors received a week's training. The societies have sold 1,000 improved implements in two years. 1,916 maunds of wheat seed, 165 maunds of cotton seed and over 4,000 maunds of chari seed were obtained from the Agricultural Department and distributed. Arrangements have been made for storing several thousand maunds of improved wheat seed for autumn sowing. Demonstration plots have been started in 18 villages. Thirty-one cotton sale societies have been started, the members of which bind themselves to grow only pure American cotton and to sell the produce co-operatively. Three ghi societies supply pure ghi.

Co-operative Supply.

271. Eight agricultural supply societies have been started and the ordinary credit society has begun to supply its members with seed, salt, oil, etc. Over 28,000 maunds of salt, 13,000 gallons kerosine oil and 6,000 maunds seed were thus distributed and a large saving was effected. The societies also purchased 142,000 tablets of quinine for the benefit of their members.

Non-Agricultural Societies.

272. Industrial societies continue to be much hampered by war conditions, but steady progress is being effected. The sales of Weavers' societies increased from Rs. 67,000 to Rs. 1,30,000.

Miscellaneous.

273. Forty-five per cent. of the societies have been classified as good as compared with 37 per cent. last year, and the proportion of bad societies has declined from 23 per cent. to 16 per cent. Careful enquiries into the work of old societies prove conclusively the great good that is being steadily achieved.

Veterinary and Live Stock.

General.

274. The year 1917-18 was, like that which preceded it, remarkable for the excess of the monsoon rains and the consequent high mortality among cattle. The prevalence of surra among equines and of hæmorrhagic septicæmia and blackquarter among bovines threw a heavy burden upon the Civil Veterinary Department, already under strength owing to the demand for officers by the Army Department. The number of reported deaths from contagious diseases was 30,085 or slightly less than in the preceding year. No less than 1,362 deaths from surra against 128 in 1916 were reported. Measures for the prevention of this disease as well as for securing that its presence is promptly brought to notice have recently been considered by conferences convened for this purpose and their recommendations are now under the consideration of Government. The examination of animals suspected of dourine resulted in the detection of 10 cases. In view of the widespread extent of this highly dangerous disease, the Dourine Act has been extended to the whole Province, and the Lieutenant-Governor has recently recommended the amendment of the Act so as to confer more drastic powers on veterinary practitioners and inspectors.

275. Among bovines, 26,153 deaths occurred from contagious diseases against 27,795 in the previous year. There were 8,495 deaths from rinderpest, 13,445 from hæmorrhagic septicæmia, 1,295 from foot and mouth disease and 2,609 from blackquarter against 15,045, 10,705, 512 and 1,087, respectively, in the previous year. The total number of animals inoculated and vaccinated was as follows :—

Year.	Anti-rinderpest inoculation.	Hæmorrhagic septicæmia		Vaccinations against blackquarter.
		Preventive inoculations.	Preventive vaccinations.	
1917-18	66,199	29,786	33,771	2,987
1916-17	81,105	18,698	36,971	2,623

Veterinary College.

276. Owing to war demands the staff of the College continued under strength throughout the year. The number of students admitted was 85. Of these 26 only were from the Punjab, while 29 were from the army and 23 from other provinces and Native States. Two hundred and fourteen students appeared in the various annual examinations, exceeding last year's number by 11. The results of the examinations were most satisfactory. It was, owing to the war, impossible to hold the post-graduate class. The number of in-patients and out-patients treated in the hospital attached to the College shows little variation from the previous year.

Hospitals.

277. The number of veterinary hospitals in the province increased by 5 and is now 127. The increasing value and popularity of these institutions will appear from the fact that the total number of animals treated during the year was over 360,000 against an average of 146,000 in the quinquennium ending in 1910 and only 30,000 in the quinquennium ending in 1905.

Cattle breeding.

278. The Department is steadily working for the improvement of cattle-breeding and there are now 1,087 stud bulls at work in the

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Province, an increase of nearly 10 per cent. on the figures for last year. The majority of additions during the year were Hissari bulls, the popularity of the Dhanni bull being more or less restricted to the districts nearest to its home.

GOVERNMENT CATTLE FARM, HISSAR.

279. The Hissar Cattle Farm suffered seriously from the excessive monsoon rains of 1917 and the consequent severe visitations of blackquarter, foot and mouth disease, hæmorrhagic septicæmia and rinderpest. Surra made its first appearance in the farm and is suspected to have spread from some of the camels of the 2nd Government Camel Corps. The farm showed a profit of Rs. 43,181 on the year. Among the most noteworthy features of the year's working should be mentioned the disposal of 100 cows at Rs. 300 each to a representative of the Brazilian Government and the distribution of 206 bulls to Punjab District Boards, a higher number than in any previous year, and the realization of Rs. 3,123 for wool, the quality of which drew special commendation from the Cawnpore Woollen Mills, Limited. The substantial addition which has been made to the fodder reserve is also satisfactory, especially in view of the present year's shortage.

27-A.—Fisheries.

280. The Kangra fishing regulations are working satisfactorily. The minimum size of mesh of net has been reduced from $1\frac{1}{4}$ inches to one inch square on the condition that fish of certain species below 12 inches in length should not be caught. The result is being watched carefully. Fishing regulations for Gurdaspur, Jullundur, and Amritsar have been published in the *Punjab Gazette* for criticism and are shortly to become law.

281. A new experimental tank has just been made at Sirkian, but has so far not been used. The carp experiments at Madhopur have not been successful. The mural spawned, but owing to various adverse circumstances casualties were enormous. Some fry were sent out for stocking tanks at Khaur and Fort Munro.

282. Trout cultural operations in Kulu were very successful and a larger number of fry was produced this year than ever previously Three thousand ova were planted in a tributary of the Ravi in Chamba and have hatched out successfully. Thirty thousand ova have been planted in two streams in Kangra proper this year, of which 18,000 have hatched out. Thirty thousand ova were sent to Garhwal on payment Ten angling licenses were issued in Kulu. The sport obtained by anglers appears to be good.

28.—Weather and Crops.

Character of the season.

283. The period of winter and spring rainfall preceding kharif 1917 was one of the driest on record, the total amount of rain from December to March being 75 per cent. short of the normal. No moisture for kharif sowings was consequently left by the rainfall of this period. In April and May 1917, however, the weather was abnormally wet and fairly heavy rains, sometimes accompanied by hailstorms, fell at intervals all over the province. The monsoon appeared on 2nd June, some three weeks before the average date, and gave abundant rain almost everywhere. It was abnormally active in August and September, and the total rainfall during these months was much above the average in all parts of the province. The monsoon disappeared about 25th September, some ten days later than usual. A feeble disturbance of the cold weather type gave a few isolated falls in the beginning of October. During the rest of the month the weather was dry except for a short interval at the end, when a severe storm caused a heavy rainfall in the eastern half of the province, the western half remaining generally drier than usual. November was rainless, December, January and February were practically dry except for a few light showers. Light rain fell in the beginning of March in the greater part of the Province, followed in the second half of the month by

heavy rain in the central and submontane districts and moderate rain elsewhere. Some rain also fell accompanied by hailstorms in the first half of April. In the second half of the month and the whole of May the weather was generally dry and clear.

284. The rainfall of April and May helped the sowings of cotton and sugarcane. The monsoon rains were excessive and the sowings of the other kharif crops were much hampered thereby, especially on low-lying lands. The heavy rains of August and September and the resulting floods seriously damaged the standing kharif crops. Further damage to these crops was done in the eastern half of the province by the rainfall of October. The excessive monsoon rains, though, in some places, they hindered the necessary cultural operations, left a sufficient moisture for the sowing of rabi crops. The sowings of these crops were also helped by the rainfall of October. The dry weather of November and December facilitated the picking of cotton and other kharif harvesting operations. The partial failure of the winter rains did not do much harm owing to the moisture left by the previous rains. The rainfall of March did much good to standing rabi crops, especially to those that had been sown late. That of April which was accompanied by hailstorms and high winds did some damage, though not considerable, on some low-lying lands, especially in the Multan Division. On the other hand, it was of distinct benefit to the crops of the North-West Punjab where harvesting starts at a much later date than in the rest of the province. The dry and clear weather of the second half of April and nearly the whole of May was favourable for the rabi harvesting operations.

285. The water-supply in canals was sufficient and river floods were high.

286. The sown area increased by 4 per cent. as compared with the preceding year and by 17 per cent. as compared with the normal. The matured area increased by 3 per cent. as compared with the former and by 19 per cent. as compared with the latter. Thus, so far as area is concerned, the year under review was better than the preceding year. **Sown and cropped areas of the year.**

287. Owing to heavy rains at the sowing time of both kharif and rabi, irrigated sowings decreased from 40 per cent. of the total in 1916-17 to 35 per cent. in the year under report. Of the total irrigated area 7,682,235 acres or 67 per cent. were watered by Government canals and the rest by private canals or from other sources. **Irrigated area of the year.**

288. The total area under wheat rose from 9,467,240 acres to 9,925,795 acres—an increase of 5 and 16 per cent., respectively, over the last year's area and the normal. As already stated, the season was favourable for spring crops notwithstanding some delay in the coming of winter rains, and the total outturn of wheat, as given in the final forecast (revised in cases where districts have reported amended figures of area), was 3,240,164 tons or 25 per cent. above the normal, irrigated 26 and unirrigated 23 per cent. above that standard. **Chief staples.**

289. The outturn of the other principal crops as compared with the estimated normal outturn is given below :—

Name of crop.	*Total outturn in percentage on estimated normal.*
Rice	157
Barley	134
Jowar	30
Bajra	95
Maize	74
Gram	190
Rabi oilseeds	107
Sugarcane	159
Cotton	85

290. Prices were higher than in the preceding year. Owing to an increased export demand the average price of wheat rose from Rs. 3-10-0 to Rs. 3-15-0 per maund. There occurred a remarkable rise in **Prices.**

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the average price of cotton, *viz.*, from Rs. 8-10-0 to Rs. 12-1-0 per maund, due to the failure of the crop in kharif 1917 and an increased demand for export. The price of jowar rose from Rs. 2-14-0 to Rs. 3-7-0 per maund and that of maize from Rs. 2-10-0 to Rs. 3-2-0 per maund. The rise in the prices of other crops was not so remarkable.

Trade and Stocks.

291. Exports of wheat and gram were heavier in the year under report than in the last year. Owing to the good harvest the imports of rice and sugar were less. Stocks of food-grains are generally sufficient. In Ambala and Lyallpur stocks are said to be held up in expectation of a further rise in prices.

29.—Horticulture.

Lawrence Gardens, Lahore.

292. During the year under report weather conditions were unfavourable and this resulted in an abnormal decline in the income from garden produce. This deficit was however balanced by a reduction of over 8 per cent. of the total expenditure of the previous year. Nearly half the total expenditure, which amounted to Rs. 33,403, was incurred in improving the ornamental aspect of the gardens.

293. A further steady advance was made in the work of beautifying the mounds and lawns.

294. The number of students attending the arboricultural class was 31 which represents a large increase on the number (22) who attended last year. This is a clear indication of the value and popularity of the training which this class provides. Out of the above number, 10 men were sent by local bodies.

30.—Forests.

Alteration in area.

295. The area controlled by the Forest Department was reduced by 137 square miles to 7,074 square miles, the decrease being chiefly due to the disforestation of irrigable land for colonization purposes. The classification of the forests is now as follows :—

	Square miles.
Reserved	1,749
Protected	4,169
Unclassed	793
Leased	363
Total ...	7,074

296. The actual area under forest growth underwent little or no reduction since most of the areas surrendered were classed as waste lands.

Forest Settlements.

297. No new areas were finally settled during the year, but 120 acres in Kulu were proposed for reservation. Good progress was made with different works connected with the Kangra Forest Settlement which is expected to be completed next year. The revision of the settlement of the Sutlej Valley forests of the Bashahr State was continued and very nearly completed, but in view of the Inspector-General of Forests' recommendation that the work should also be extended to all high-lying fir and blue pine forests not hitherto demarcated, its completion was held in abeyance pending receipt of Government orders on the subject.

Working Plans.

298. The revision of the Working Plans for Kangra and Kulu was continued and considerable progress made.

299. A scheme for the working of the brushwood forests in the Lower Murree Range of Rawalpindi West Division was drawn up and will be brought into operation next year. Browsing schemes for the 52nd and 57th Silladar Camel Corps were sanctioned during the year as also the scheme for the permanent provision of browsing for the silladari camels on the line of march.

Protection.

300. The total number of forest offences reported was less than last year and the average of three preceding years by 1,559 and 2,070, respectively. Half this decrease occurred under the head "unauthorized fellings" and was attributable to extension of cultivation in Multan and to the opening of old *trihais* in Kangra. The total area of forest burnt was 11,796 acres as compared with 3,999 acres in 1916-17. The fire season of 1917-18 was a successful one in spite of a light rainfall. In Kangra alone, where 6,525 acres were burnt, was there any deliberate incendiarism. For the third year in succession the inhabitants of Rawalpindi District have co-operated in protecting the Rawalpindi chir forests from being burnt. Out of 1,085 acres burnt in the Rawalpindi District over 500 acres were scrub forests situated remote from the chir forests. Late and heavy snowfall in March and April caused much damage from avalanches and snowbreak in the higher hills, especially in Bashahr. In the higher chir forests in Rawalpindi the effect of this late snow was to kill off practically the whole of the needles; the trees have, however, since recovered.

Natural and artificial reproduction.

301. Practically all the principal species failed to give even an average crop of seed. Most of the deodar cones were again destroyed by insects, except in the dry regions of Kanawar. In Rawalpindi hardly any chir seed was produced. The oaks in Kangra are reported to have seeded well. Existing regeneration of deodar again suffered to a certain extent from drought in May. Owing to the continued absence of a good seed year the regeneration of this species is being retarded and there is no fresh development to report since last year. In Rawalpindi there are large numbers of chir seedlings from previous years, and with three years' practical immunity from fire the outlook is promising. In the bamboo forests there is little reproduction by seed, but the production of shoots is generally sufficient. Coppice reproduction is generally satisfactory, though, as usual, there was a certain amount of damage from frost in some parts of the irrigated plantations.

302. Owing to a favourable rainfall good progress was made with the formation of irrigated plantations. Work in Daphar plantation was confined to the preliminary operations of clearing, trenching, etc., preparatory to sowing in April 1920. In the remaining plantations 1,292 acres were sown, bringing the total area sown in those new plantations up to 4,548 acres. Sowings except in *Kallar* soil were generally successful and moderate in cost except in Kot Lakhpat. Up to the end of the year, the total expenditure incurred on and the revenue derived from these new plantations has been Rs. 1,82,000 and Rs. 1,68,000, respectively.

Exploitation.

303. The total area worked over under the different systems of management was 63,969 acres as compared with 61,150 acres last year. The most satisfactory feature in regard to the system of management employed in working forests for the production of major produce was the considerable increase in the area worked under the uniform method in Rawalpindi and Kulu. The area so dealt with should increase rapidly with the revision of existing working plans which mostly prescribe less suitable systems of management.

304. The total outturn of all classes of produce as compared with the figures of the previous three years is given below :—

	Timber.	Firewood.	Minor produce.
	Cubic feet solid.	Cubic feet solid.	Value, Rs.
1917-18	8,260,000	27,116,000	24,02,487
Average 1914-15 to 1916-17 ...	8,106,000	28,287,000	23,57,637

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305. There was a very large increase in the departmental extraction of timber due chiefly to the commencement of departmental working in Bashahr and also to more extensive fellings in Rawalpindi and Lahore in order to meet military demands. This was, however, partly counterbalanced by a decrease in the removals by purchasers in Kangra, Simla and Rawalpindi, owing partly to arrear sales having been cleared off in 1916-17 and partly to unavoidable restriction of sales to purchasers in the interests of departmental working. The departmental extraction of firewood was limited by the transport available and in Rawalpindi and Lahore the demand by the Military Department was far in excess of the quantity the Forest Department could transport. There was also a large increase in the outturn of minor produce which was mainly due to the departmental extraction of bamboos in Kangra and to increased extraction of resin in Kangra and Rawalpindi. The Department extracted 8 lakhs of bamboos in Kangra, most of which were secured by the Military authorities to meet various war requirements.

306. In the Resin division 542,173 blazes were tapped, yielding 23,040 maunds of resin. 32,564 maunds of resin, including 10,042 maunds distilled for the United Provinces, were distilled at the Jallo factory, yielding 16,246 maunds of rosin and 46,709 gallons of turpentine. The average sale price obtained for rosin was Rs. 16-3-4 per maund and for turpentine, quality I, Rs. 3-14-7 per gallon.

Miscellaneous.

307. Relations between Revenue and Forest Officials were satisfactory, and the Department is indebted to District Officers for the assistance given in overcoming difficulties of transport which were so acute during the year under report.

308. Negotiations for leasing the European olive plantation at Khairimurat in Rawalpindi West Division having fallen through, the Department took over charge of the plantation during the year. The plantation has an area of 94 acres stocked with 15,000 olive trees. During 1917, 200 trees bore fruit and some 300 trees are bearing fruit during the current year. Fruit of the 1917 crop was pickled experimentally and oil expressed on a small scale, the results being apparently satisfactory.

309. Great difficulty has been experienced in providing browsing for the numerous camel corps which have been formed during the last three years, and the rapid deterioration of the plains forests seemed inevitable. Surra has, however, broken out in many of the corps and in order to prevent the spread of this disease it has been decided to stall-feed Government camels in future. It is also proposed to treat surra-infected camels with pyroligneous acid, a product of distillation of wood. The existing supply of this acid being quite inadequate the Forest Department proposes to erect a small plant in Kangra Division in which chir wood will be distilled. Besides pyroligneous acid the distillation process yields wood tar for which there is a strong demand in India to replace Stockholm tar.

310. During the year the Military authorities secured 3,350,000 cubic feet of timber exclusive of railway sleepers within the province as compared with 1,035,000 cubic feet in 1916-17. Military Departments were also supplied with 216 tons of rosin and 9,575 gallons of turpentine.

Financial results.

311. The financial results are given in section 43; the year's working shows a surplus of Rs. 16,65,627 and a cash surplus of Rs. 9,34,704. The prices of all classes of timber continued to be high and the market for resin products was again most favourable.

31.—Mines and Quarries.

Indian Mines Act.

312. The total number of mines worked during the year under report was 31. Of these 4 are Government salt mines, 16 coal mines (10 in Jhelum, 3 in Mianwali and 3 in Shahpur), and 11 are slate mines (3 in Gurgaon, 2 in Gurdaspur, 5 in Kangra and 1 in Hoshiarpur). A new mining lease for coal was granted over an area of 32·7 acres at Dandot (Jhelum). No new prospecting license for coal was given.

313. The total amount of minerals raised with their values as compared with 1916 is given below :—

	Mineral, in tons.		Value, in rupees.	
	1917.	1916.	1917.	1916.
Coal	49,838	47,44[illegible]	3,76,192	3,20,026
Salt	152,360	160,356	3,88,809	4,09,244
Slate, Stone and Lime ...	8,860	7,315	1,07,913	1,07,890
Potash	181·04	...	9281/3	*Nil.*

314. Except in the case of salt there was a slight increase in the outturn compared with 1916. The figures for potash are shown for the first time. The Commissioner, Northern India Salt Revenue, is making borings of the potash deposit in the Salt Range : the deposits lie in the immediate neighbourhood of the salt mines. It is understood that prospects are not hopeful.

315. The health of the operatives was generally good with the exception of the employees of coal mines who suffered to some extent from malaria. Arrangements for sanitation were satisfactory. Wages have risen considerably on account of scarcity of labour due to recruitment.

316. Minerals which do not come under the Indian Mines Act are gold (by washing), petroleum, alum-shale, black kunkar, limestone, gypsum, antimony ore, building and sand stone. The outturn and value of these minerals during the year are as follows :— Other minerals.

District.	Name of mineral.	Outturn.	Value.
			Rs.
Ambala, Attock and Jhelum ...	Gold (by washing) ...	190·08 ounces	12,848
Attock	Petroleum	618,598 gallons	77,324
Mianwali	Do.	919 gallons	201
Do.	Alum-shale	3,287 tons	3,864
Ambala	Black kunkar	1,495 tons	2,929
Jhelum	Limestone	14,002 tons	10,501
Do.	Gypsum	1,068 tons	801
Do	Antimony ore	2·58 lbs.	31
Do.	Sandstone	109,432 tons	1,09,033
Simla	Building stone	9,208 tons	2,151

32.—Manufactures.

317. The total number of factories subject to the Factory Act was 191 against 184 in the previous year. The total number of operatives employed was approximately 32,000, consisting of 27,818 men, 3,211 women and 935 children. The number of factories inspected by the Inspector of Factories was 72 against 149 last year. The decrease in the inspections is due to the fact that the Factory Inspector was transferred to military duty just when the seasonal factories were starting work. Some few inspections were made after his departure by district officers.

318. Cotton-ginning factories did not work at full pressure in any district, partly because the cotton crop was not very good and partly because the number of such factories is in excess of the real needs of the Province. The water-supply has been good and sufficient Lighting and ventilation have of late been considerably improved Sanitary conditions have also on the whole been satisfactory. The fencing of dangerous parts of machinery

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had continued attention—149 orders for fencing or guarding particular machines or exposed gearings were issued; they were complied with in all cases except where the machinery was standing idle. There was a small increase in the number of accidents that occurred during the year: below is given a comparative statement of accidents for the last three years:—

1915.	*1916*	*1917.*
195	190	211

319. During the year prosecutions were instituted against 10 factories and all but one were successful.

320. Women and children are still employed, to some extent, for excessive hours in factories. The weekly holiday is generally observed, but by no means always. There has been a general rise in the average rate of wages. The increase is more marked in the case of unskilled than of skilled labour; this is mainly due to the continued demand for labour for war purposes, and to the rise in the cost of living.

33.—Trade.

Rail and River-borne Trade.

General.

321. Since the commencement of the war the volume of imports has been steadily decreasing and their value steadily increasing owing to the conditions brought about by the war. The volume of imports was considerably below in the year under report and the value considerably above the pre-war period. Exports, on the other hand, do not seem to have been adversely affected by the war for, as regards both their volume and value, the year under report compares favourably with the pre-war period.

Imports.

322. No noticeable increases occurred in the volume of imports, but there were some notable increases in value, *viz.*:—

	Rs.
Twist and yarn (Indian)	58½ lakhs.
Cotton piece-goods (foreign, in bales)	146¾ ,,
Cotton piece-goods (Indian, in bales)	104¼ ,,
Bars, girders, etc.	41¾ ,,
Sugar (refined)	45½ ,,
Dried fruits and nuts	25½ ,,

323. There occurred an increase in cotton piece-goods (in bales) at the expense of those in boxes last year also. The imports of bars and girders, etc., and sugar, refined, which showed a considerable decrease last year, have more than recovered the lost ground in the year under report.

324. The chief decreases in the net imports are:—

Name of article.	Weight in lakhs of maunds.	Value in lakhs of rupees.
Piece-goods, foreign (in boxes)	1½	1,14
Gur, rab, etc.	6¼	39½
Sugar (unrefined)	2½	30¾
Jowar and bajra	4½	13½
Machinery and mill work	½	14¾
Coal and coke (for railway purposes)	29½	6¼
Hay, straw and grass	9⅛	6¼
Kerosine oil	2¼	10½

The outturn of gur was better than the normal both in the year under report and in the preceding year; and consequently there occurred a decrease in the import of gur, rab, etc., in both these years. The imports of

jowar and bajra also declined in both the years owing to the fact that the outturn of bajra was much above the normal in the preceding year and did not considerably fall short of it during the year under report. The ample supply of fodder in the year under report accounts for the decrease in the net import of hay, straw and grass. The decrease in the import of kerosine oil and of coal and coke imported for railway purposes was due to high prices and shortage of freight due to the war. The imports of coal and coke for private purposes also decreased in volume, though not in value.

Exports.

325. The most important increases in net exports are :—

Name of article.	Weight in lakhs of maunds.	Value in lakhs of rupees.
Gram and pulse	34	143½
Wheat	15¼	123¾
Wheat flour	11¾	68¾
Rice (husked and unhusked)	4	26
Other grains	12¾	46¾
Carriages and trucks	2½	30
Wool, raw	1¾	71
All other articles of merchandise	5¼	26¾

326. The increases in the export of grains were chiefly due to the fact that there was a larger outturn in the year under report than in the preceding year. The large increase in the export of gram and pulse and of "other grains" was also partly due to the fact that, owing to deficient export in the preceding year, there was an unusually large demand for their export in the year under report. The increase in the export of carriages and trucks and of raw wool was due to increased military requirements.

327. The exports of raw cotton decreased by 5¾ lakhs of maunds in weight and Rs. 28¾ lakhs in value, owing to the fact that the crop of the year under report was much inferior to that of the preceding year. The other important decreases in exports, all of which were due to restricted demand and difficulties about freight, were under hides of cattle, raw, Rs. 44 lakhs; skins of sheep, etc., Rs. 25½ lakhs; locomotive engines, Rs. 15¼ lakhs; and silk raw (Indian), Rs. 13¾ lakhs. The trade in cattle hides had been abnormally active last year and the decline in the year under report probably marked its return to normal activity.

Treasure.

328. Owing to the high price of gold, the net import of gold bullion, which had decreased by 75¾ lakhs in the preceding year, showed a further decrease of 10¾ lakhs in the year under report. The net import of silver bullion, which had fallen by 118¼ lakhs in the preceding year, showed an advance of Rs. 78 lakhs in the year under report. The import of gold coin advanced by Rs. 120½ lakhs and that of silver coin by Rs. 7¼ lakhs.

TRANS-FRONTIER TRADE.

329. As compared with the year 1916-17 the imports increased by 3,159 maunds in weight and by Rs. 3,15,713 in value and the exports by 9,414 maunds in weight and by Rs. 22,51,451 in value.

Trade with Afghanistan.

330. There was an increase of 400 maunds in weight and of Rs. 2,092 in value under imports and of 6,928 maunds in weight and of Rs. 5,12,854 under exports. Much of the increase in the value of exports was due to a general rise in prices.

Trade with Central Asia.

331. Under imports there was an increase of 642 maunds in weight and of Rs. 3,19,542 in value, chiefly under sheep and goats, Tibetan salt, charas, raw and manufactured silk and raw wool. The increase of 652 in the sheep and goats was due to a remarkable rise in the import of Tibetan salt,

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for the transport of which these animals are employed as beasts of burden. The import of this salt increased by 1,686 maunds in weight but decreased by Rs. 502 in value. The fall in value is ascribed to the inferior quality of the imported salt and the increase in weight to a larger demand in the Kulu markets due to the dearness of the Indian salt. Under charas there was a decrease of 626 maunds in weight and an increase of Rs. 71,743 in value. The decrease in weight is ascribed to the accumulation of large stocks in the Punjab in previous years, the removal of 473 maunds of charas from the Leh warehouse out of the preceding year's balance and the partial replacement of charas by silver and Russian notes as a medium of exchange for the Yarkandi trader. The increase in value is believed to be due to the willingness of traders to pay high prices for charas in the expectation that the demand for this commodity, which has been comparatively small of late, owing to a general rise in prices and the removal of troops from India, will regain in the current year some of its former briskness. The increase under raw silk was due to an increased demand for this commodity resulting from a large increase in the price of foreign cloth. Under manufactured silk there was a slight decrease in weight accompanied by an increase of Rs. 3,293 in value owing to a rise in the price. The import of raw wool decreased by 489 maunds in weight owing to a larger import of this commodity into Kashmir for pattu-manufacturing purposes and increased by Rs. 4,941 in value owing to a rise in the price.

332. There was an increase of 2,681 maunds in weight and of Rs. 17,59,578 in value under exports. The dislocation of Russian trade and the consequent absence of Russian competition account for an increase both in value and weight under cotton twist and yarn, cotton piece-goods (European and Indian), indigo, paints and colours, skins of goats and sheep, manufactured silk and refined sugar. The increase in the export of intoxicating drugs (other than opium) and of leather was due to the exhaustion of the previous stocks of these articles which had been exported in comparatively small quantities in the preceding year. The increase of Rs. 35,518 in the value of coral as compared with an increase of only 20,080 tolas in its weight was due to the fact that the coral exported during the year was of superior quality. The increase under tobacco was due to the replacement of Kashmir tobacco by Peshawar tobacco and cheap cigarettes as far as export to Central Asia is concerned. The increase of Rs. 10,073 in value and of 183 maunds in weight under Indian black tea synchronized with the fact that there was no export of green tea, of which 287 maunds were exported in 1916-17. The decrease in the value of other articles of merchandise which consist of cheap fineries, toys, etc., is due probably to the scarcity of such articles in India.

Trade with Tibet.

333. There was a decrease of Rs. 5,921 in the total value of imports and of Rs. 20,981 in the total value of exports. The weight, however, increased by 2,117 maunds in the case of the former and decreased by 1,195 maunds in the case of the latter. The principal variations under imports related to sheep and goats, borax, salt and raw wool. The increase under borax was due to a large increase in demand for this commodity owing to the war. Under salt the increase was due to a large rise in the price of Indian salt. The increase under sheep and goats was due to the fact that a larger number of these animals was required for the transport of borax and salt. The decrease under wool is believed to be due to several causes, namely, that the passes were blocked by early snow, that in parts of Western Tibet a monopoly of wool purchases has been given by the Lhasa authorities to some Hindu traders of Kumaon, who import this commodity into the United Provinces, and that the produce of wool was exceptionally good in 1916-17 and, consequently, a larger quantity of it was then available for export. Under exports the principal variations were—(*a*) an increase of Rs. 10,361 in the value of Indian and a decrease of Rs. 12,639 in the value of European cotton piece-goods due to a relatively large increase in the price of European cotton piece-goods, and (*b*) a decrease of Rs. 7,617 in the value of Indian tea, green and black, due probably to the apathy of the Kangra tea planters to the advantage of capturing the Western Tibet market where there is a continuous and heavy demand for brick-tea which is now brought there from China and Kumaon.

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334. The import of gold and gold coin from Central Asia decreased by Rs. 4,37,726 in value The decrease is, however, nominal for in last year's report the value of Russian currency notes was included under this head under a misapprehension. There was actually an increase of Rs. 1,27,787 in the value of gold and gold coins imported from Central Asia. The export of gold and gold coin to this country was inconsiderable both in 1916-17 and in the year under report. The import of silver and silver coins from Central Asia increased by Rs. 4,32,726 and the export of silver and silver coins to that country by Rs. 52,358 in value. The value of Russian paper money imported from Central Asia increased by Rs. 7,95,448. The increase is attributed to the large profits made by traders on their transactions in this paper in 1916-17 owing to a great difference between the Indian and the Central Asian rate of exchange. The increase in the import and export of silver and silver coins was due to an increase in the value of trade with Central Asia and the substitution of silver coins as a medium of exchange for charas. There was an increase of Rs. 36,578 in value under export of silver coins to Chinese Tibet. Treasure.

JOINT STOCK COMPANIES.

335. The number of registered companies has increased by 3 to 83, the number of private ones has increased from 11 to 18 and the number of public companies has declined by 4. Seven new companies were registered and 4 went into liquidation. The whole paid-up capital of Indian-managed companies has declined by over 5 lakhs while that of European-managed concerns has increased by nearly 48 lakhs. The total for the Province is 42·5 lakhs. The Provident Funds are dying out. Indian Joint Stock enterprise continues to be on the decline chiefly as a result of incompetence, dishonesty or want of business ability.

34.—Buildings and Roads.

336. The total outlay on public works in the Buildings and Roads Branch amounted to 57·8 lakhs, or 8½ lakhs more than last year. Imperial Military Works and Land Revenue buildings each accounted for 2 lakhs of this. There was also an increased expenditure of 1¾ lakhs on road construction and improvements, 1¼ lakhs on Educational buildings, and smaller amounts under almost every other head of the Provincial Administration. Contribution Works, however, showed a falling off of over 2 lakhs and Miscellaneous and General of ¾ of a lakh. Total expenditure.

337. The addition of another storey to each of the two large blocks of Army Head Quarters Offices in Simla, in order to keep pace with the growing needs of the Military Secretariat, was a work undertaken at very short notice and carried through to completion in the short space of four months. The construction of infantry lines for a depôt strength of 1,350 men at Montgomery further helped to swell the expenditure under this head. Imperial Military Works.

338. Apart from the special repairs to Viceregal Lodge, necessitated by the decay of the stone, which have been in hand for some years, the only Imperial Civil Work of any importance was a much-needed extension of the Rawalpindi Telegraph Office which was taken in hand towards the end of the year. Imperial Civil Works.

339. The combined tahsil and thana at Khanewal as well as court-houses for the Sub-Divisional Officers at this place and at Moga were completed and the new sub-treasury and judicial lock-up at Bhalwal nearly finished. Good progress was also made on the new tahsil buildings at Lahore and Okara as well as on the settlement office at Dera Ghazi Khan. Towards the end of the year court-houses for the Sub-Divisional Officers were taken in hand at Leiah and Alipur and arrangements made for extending the revenue record room at Dharmsala. Two houses were also started on the area acquired for gazetted officers' residences in Lahore. The whole of this area has been laid out, roads made and trees planted, while, in the hope of improving the soil, the vacant sites have been ploughed up and put under crops. The grain elevator at Lyallpur is Provincial Civil Works.

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still waiting for some of its machinery from England, but even the arrival of the machinery will not permit of the elevator being brought into use, as it is dependant on the electrification of the town for its motive power. The boarding-house accommodation in the Agricultural College was further extended and a separate hostel, with additional amenities, provided for minors under the charge of the court of wards.

340. Rest-houses were completed at Nurpur (Jhelum District) and at Nankana Sahib, as well as a combined civil rest-house and dâk bungalow at Khanewal. In Simla, the policy of gradually acquiring house property, as residences for Punjab officials who have to accompany the Local Government from Lahore, was continued, by purchasing the large Brockhurst Estate. This property includes two houses and some twenty acres, with ten good building sites. It is intended to add two storeys to the larger house to provide accommodation in suites for ten married and six single officers, while other officers and a number of senior clerks will find accommodation in the other houses to be built on the estate.

Communications.

341. After much consideration, a start was made on the road which is to link up the Attock oil-fields at Khaur with the railway at Fatehjang. North of Gujrat, the Grand Trunk Road was raised well above flood level where it had been submerged and breached more than once during recent years by the Bhimber. Coming south, the improvements to the road between the new Ravi Bridge and Lahore were completed. Still further south, near Ambala, the protective works, undertaken to prevent the Tangri from spilling into the Umla, having proved successful, arrangements are now being made to bridge these torrents and thus provide a continuous bridged and metalled road all the way from Delhi to Lahore.

342. Metalling of the Kangra Valley Cart Road was finished through to Baijnath, and work was resumed on the first section of the Larji-Mandi Road. No progress could be made on the Shershah-Multan Road, owing to the inability of the North-Western Railway to find trucks to bring road metal from the quarries, a factor which has rendered road maintenance and construction a serious problem in many parts of the province where there are no local sources of supply. The problem has been rendered more acute by the concurrent increase in short distance traffic in overloaded bullock carts, which has much accentuated the surface wear and tear, at a time when metal for repairs was unobtainable.

Miscellaneous public improvements.

343. The approach to the Shalimar Garden in Lahore was improved, and the tarring of the Mall extended so as to further mitigate the dust nuisance in the capital. Some additional roads were constructed in the Lawrence Gardens, needle weirs were being built on the Chhota Ravi in order to create an artificial lake in the Minto Park and some progress was also made on the new riverside park opposite the Baradari near the site of the old road bridge.

Contribution Works.

344. The King Edward Memorial group of college and hospital buildings were practically finished and the grounds laid out. In the Aitchison College a house was built for another Assistant Principal. The church at Dharmsala, destroyed in the earthquake of 1905, was completed only to be so severely shaken in the earthquake of the 10th May 1917 that the tower is no longer safe and a considerable portion of the building will have to be dismantled.

Sanitation.

345. The extension of the Dera Ghazi Khan water-supply was practically completed as well as those at Lyallpur and Dalhousie, while experimental borings were in hand to try to find suitable water-bearing strata from which to augment the Ambala water-supply. The surface drainage scheme was sanctioned for Jullundur, but the difficulty of procuring materials necessitated the postponement of the work till happier times. Drainage schemes were, however, either in hand or completed for nine other municipalities. Eight schemes were surveyed and ten projects aggregating Rs. 11,65,801 were prepared in the Sanitary Engineer's office, while fifty-seven other projects prepared in the general branch or by Local Bodies werescrutinised.

346. There was no diminution in the quantity of work passing through the Consulting Architect's office. The King Edward Memorial still claimed attention and a design was prepared for a clock tower on the Anatomical Block. Other Lahore designs included a Government College hostel and the new gates for Government House while rough preliminary sketches were prepared for a new Telegraph Office. A design was worked out in consultation with the Director of Public Instruction and the Principal for a Central Training College in connection with the Lawrence Military Asylum at Sanawar where it is also proposed to erect a crêche for the orphans of British soldiers, and other buildings for which sketches were prepared. Designs were also prepared for a number of subsidiary buildings in connection with the Princess of Wales Zenana Hospital in Amritsar, an exhibition hall and pavilion at Jullundur and a number of Government buildings, while advice was given on several important building and town improvement schemes. Consulting Architect.

347. In addition to his own work and acting as Electrical Adviser to the Bahawalpur and Jind Durbars, the Electrical Engineer undertook the work of the North-Western Railway, thereby releasing an officer for military service. Some progress was made on the projects for the electrification of Rawalpindi, Lyallpur and Sonepat, but owing to the increased difficulty of obtaining electrical machinery and forecasting prices, no new projects of any magnitude were prepared during the year. Electrical Engineer.

348. The Buildings and Roads Branch of the Department of Public Works has contributed very largely from its European staff for direct war work, and during the year under review two more officers have been released for military duty, while one was recalled from active service in France while on furlough. Owing to the increase in the quantity of work accomplished by a reduced staff, the establishment charges dropped from 27·3 per cent. of the previous year's provincial outlay to 20·09 per cent., while, calculated on the total works and maintenance outlay incurred by the Department during the year under review, and taking into consideration the remissions on contribution works, the establishment charges amounted to 16·3 per cent. of the works outlay. Establishment.

34-A.—Railways.

349. No new lines were opened and the public booking of goods had to be restricted in order to give preference to essential military and export traffic.

35.—Irrigation.

350. The direct receipts and expenditure were Rs. 2,82,36,999 and Rs. 1,44,29,762, respectively, as against Rs. 2,63,30,996 and Rs. 1,64,73,225, the average of the triennium ending 1916-17. The expenditure, as divided between capital and working expenses, was Rs. 26,13,585 and Rs. 1,18,16,177, respectively; the former included Rs. 22,08,565 expended on the triple canals. General.

351. The indirect revenue credited to the canals on account of enhanced land revenue, etc., amounted to Rs. 1,17,65,897 as against Rs. 1,19,54,952, the average of the previous triennium.

352. The total area irrigated by works of all kinds under the control of the Irrigation Department amounted to 9,063,901 acres, showing a decrease of 515,923 acres and 156,796 acres as compared with the previous year and the previous triennial period.

353. The capital outlay (direct and indirect) incurred on the canals classed as Productive Major Works amounted to Rs. 26,88,971, bringing up the total capital cost of these works to about Rs. 2,388 lakhs including Rs. 155 lakhs contributed by the Native States. The net revenue earned by Imperial Canals was Rs. 2,66,99,422, giving a profit of Rs. 11·95 per cent. on the capital invested to date (Rs. 22,33,05,164).

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354. The area irrigated by and the financial results of the operations of canals classified as Productive Major Works is shown in the following statement :—

1	2	3	4	5	6	7	
Serial No.	Name of Canal.	Area Irrigated.	Gross income.	Working expenses.	Net income.	Percentage profit on the capital outlay	
						Excluding interest charges.	Including interest charges.
		Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Western Jumna ...	725,325	(a) 33,13,833	(a) 13,70,721	(a) 19,43,112	(a) 10·98	(a) 7·67
2	Sirhind	931,894	(b) 34,35,019	(b) 12,54,492	(b) 21,80,527	(b) 8·51	(b) 5·20
3	Upper Bari Doab ...	1,144,521	49,42,130	13,34,133	36,07,997	16·52	13·17
4	Lower Bari Doab ...	621,600	16,43,347	9,13,857	7,29,490	3·24	-0·11
5	Upper Chenab	382,935	23,45,069	10,86,613	12,58,456	3·52	0·16
6	Lower Chenab ...	2,277,125	1,52,63,175	24,60,511	1,28,02,664	39·37	35·99
7	Upper Jhelum ...	177,006	5,37,993	8,27,495	-2,89,502	-0·64	-4·00
8	Lower Jhelum ...	765,470	44,29,159	9,15,765	35,13,394	21·65	18·29
9	Upper Sutlej Inundation Canals.	437,857	7,50,284	3,82,314	3,67,920	20·24	16·96
10	Sidhnai ...	318,442	7,01,625	1,58,769	5,42,856	40·75	37·38
11	Indus Inundation Canals	204,213	4,41,690	3,99,182	42,508	1·42	-1·95
	Total ...	7,986,388	3,78,03,274	1,11,03,852	2,66,99,422	11·95	8·60

(a) Excludes Patiala State.
(b) Excludes Native States, Patiala, Nabha and Jind.

355. On all the Imperial Minor Works not classed as Productive, including the two canals for which capital account is kept, the net profit amounted to Rs. 12,36,137 as against Rs. 11,36,719 in the previous year.

356. There is only one Provincial Canal in operation, *viz.*, the Shahpur Provincial Canal. The Ravi Inundation Canals now cease to exist. The net profit was Rs. 17,179.

357. The details of the working of each canal are given below :—

Major Works—Canals in operation.

Western Jumna Canal.

358. The Canal was in flow for 303 days (148 days in *kharif* and 155 days in *rabi*) ; it was closed for 62 days (35 days in *kharif* and 27 days in *rabi*). The monsoon was abnormally active commencing early in June and gave good rain until the end of September. During *rabi* there was very heavy rain at the end of October, but the rest of the season was almost rainless. The total area irrigated, including the area irrigated in the Patiala and Jind States, was 725,325 acres (373,102 acres in *kharif* and 352,223 acres in *rabi*) as against 843,127 acres the average of the previous triennium. The decrease in the area irrigated was due to the heavy rainfall during both crops and to recent years having given exceptionally high results.

359. The gross receipts were Rs. 33,13,833 and the working expenses Rs. 13,70,721, giving a net revenue of Rs. 19,43,112 against Rs. 17,47,744, the average of the previous triennium, and Rs. 17,95,729 of the previous year. The increase was due to an increase in the area irrigated during *rabi* 1916-17 the revenue on which was collected during the year. The result would have been still better if the cotton crop had not been damaged by excessive rainfall in the *kharif* of 1917.

360. The net revenue received by the Patiala State on their channels on the Sirsa Branch amounted to Rs. 2,20,460 or 19 per cent. on the capital invested against an average of Rs. 1,34,293 or 11·57 per cent. for the triennium ending 1916-17 and Rs. 1,20,147 or 10·35 per cent. of the previous year. The area assessed was 74,878 acres (40,696 acres in *kharif* and 34,182 acres in *rabi*) as against 71,036 acres the average of the previous triennium.

361. The working of the Jind State Distributaries showed a profit of Rs. 1,36,391 against Rs. 1,00,187 in the previous year. The irrigation was 59,696 acres as against 62,363 acres, the average of the three previous years.

Sirhind Canal.

362. The canal remained in flow for 223 days (105 in *kharif* and 118 in *rabi*). In *kharif* the rainfall was exceptionally heavy, approximately double the normal. In *rabi* also the rainfall was in excess of normal, but most of it fell in October and the rest in March. From November to February the weather was exceptionally dry and the river supply insufficient to meet the keen demand.

363. The area irrigated on British and Native States Branches was 931,894 acres. It was the lowest since 1910-11 when it was 843,476 acres, the maximum being 1,609,458 acres irrigated in 1911-12. The decrease is due to heavy rains.

364. The net revenue earned by the British Branches amounted to Rs. 21,80,527 or 8·51 per cent. on the capital invested. The corresponding figures for the previous year were Rs. 29,76,526, or 11·63 per cent. The decrease was due to the shortage in the areas on which collections were made, being 753,083 acres as against 936,182 acres in the previous year. The working expenses of Rs. 12,54,491, though less by Rs. 1,32,658 than that in the previous year, works out the rate of Rs. 2·27 per acre irrigated, which is the highest on record, the previous highest being Rs. 2·24 in 1893-94 when the canal was closed for 3 months early in the *kharif* season owing to silt troubles in the main line. This figure is hardly likely to recur as the area irrigated was phenomenally low and at the same time heavy maintenance charges on torrent works were incurred.

365. On the Native States Branches the net revenue was Rs. 22,61,944, or 9·20 per cent., on the capital invested, as against Rs. 25,72,310, or 11·38 per cent., in the previous year.

Upper Bari Doab Canal.

366. As compared with 1916-17 the area irrigated (1,144,521 acres) showed a decrease of 56,776 acres due to the abnormal monsoon rainfall, the heaviest experienced since 1908, and to plentiful rainfall in September and October, which allowed large areas to be sown and matured in the *rabi* without canal water; it is to some extent also due to land flooded by rain in October not having dried in time to permit of *rabi* sowings. The net income amounted to Rs. 36,07,997 equivalent to 16·52 per cent. on the capital invested against 17·35 per cent. of the previous year.

367. The occupier's rates remitted amounted to Rs. 3,04,973 against Rs. 97,292 in 1916-17. Heavy remissions resulted from great damage to the cotton crop caused by abnormal rainfall for which special remissions had to be granted. Liberal remissions were also necessitated in *rabi* 1916-17 on account of the abnormally dry season.

368. The canal was closed from 17th April 1917 to 2nd May 1917 when all falls were unwatered and repaired where necessary. The year under report was unfavourable for agricultural operations on this canal.

Lower Bari Doab Canal.

369. The canal was in flow for 323 days against 313 days in the previous year. The demand for canal water was slack in the *kharif* season, especially during August and September when heavy rain fell, but very keen in the *rabi* season owing to scanty rainfall. In the winter the supply in the Ravi was sufficient to give the Sidhnai Canal its indent and to supplement the shortage which occasionally occurred in supply received from the Upper Chenab Canal.

370. The area irrigated was 621,600 acres as against 871,308 acres anticipated in the project forecast. In 1916-17 the irrigation was 514,936 acres against 650,000 of the project. The progress of irrigation is a year

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behind that of its project estimate, owing chiefly to the canal having started irrigation a year later than had been anticipated and to the backwardness of colonization.

371. The gross receipts amounted to Rs. 16,43,347, the working expenses to Rs. 9,13,857 and the net revenue to Rs. 7,29,490. The receipts are 6·8 lakhs more than last year though greatly reduced on account of remissions and backwardness of colonization.

372. The great increase in the working expenses is due to the closure of the project estimate. Expenditure under capital has decreased, that under working expenses increased and a greater proportion of establishment charges is now debited to the latter head.

373. Proprietary areas possess good soil and are being fully irrigated and cultivated. The area of Crown Waste land allotted at the end of the year was 817,662 acres out of the 1,016,972 acres of the culturable area commanded. Great assistance to the working of channels was afforded by the large increase in temporary allotments, but more needs to be done in this direction.

Upper Chenab Canal.

374. The area irrigated during this and in the previous year was 382,935 acres and 437,477 acres, respectively, as against the project forecast of 648,367 acres. The falling-off during the year was chiefly due to the abundant rainfall. The heavy rain in September and October reduced the demand for canal water to mature the *kharif* crops and enabled a large area of *rabi* crops, especially gram, to be sown and matured without canal water. The steps taken strictly to exclude all well lands from canal irrigation also adversely affected the irrigated area.

375. As compared with the project forecast the development of irrigation has not been as rapid as was anticipated, mainly due to a shortage in *rabi* irrigation. Up to 1915-16 the *rabi* irrigation on this canal represented only the area to which first and last waterings were given owing to the unforeseen delay in the completion of the Upper Jhelum Canal. The Upper Jhelum Canal was opened in December 1915, but was unable to carry the full supply intended in 1916-17, and this, combined with the failure of winter rains and the consequent low supply in the river, resulted in a further drop in the *rabi* irrigation in that year. The year under report was also not favourable for canal irrigation on this canal.

376. The net revenue amounted to Rs. 12,58,456, or 3·52 per cent. on the capital outlay. This canal is, to a large extent, a feeder channel for the Lower Bari Doab Canal and one-third of the irrigated area is irrigated during *kharif* only and its commanded area is intersected by numerous hill streams, which, when in flood, compete with the canal as a means of irrigation, thereby impairing the financial result of the project.

Lower Chenab Canal.

377. The canal ran for 137 days in the *kharif* and 162 days in the *rabi*, the period of closure being 48 days in the former and 20 days in the latter.

378. The *kharif* season was excessively wet and demand was seldom keen. The late rains in September and October gave a great impetus to *rabi* sowings, and as the rainfall in the *rabi* months was in defect the demand was strong throughout. It was, however, sufficiently met.

379. The area irrigated was 2,277,120 acres, being less by 17,215 acres as compared with the triennial period ending 1916-17, but more by 3,828 acres than the three years ending 1913-14.

380. The net revenue amounted to Rs. 1,28,02,664, or 39·37 per cent. on the capital outlay, as against Rs. 1,41,10,320, or 43·61 per cent. in the previous year.

381. The decrease was due to—

(*a*) deduction of Rs. 8,34,000 for cost of Civil Administration of the Lyallpur District for the 3½ years previous to the year under report. This omission by the Civil Department enhanced the percentage of the previous years and reduced that of this year.

(*b*) the decrease in the area irrigated during *rabi* 1916-17 owing to deficient rainfall and consequent low river.

382. The accumulated net profits have increased from Rs. 12,71,39,042 to Rs. 13,88,42,183 against a capital of Rs. 3,25,18,571 invested at the end of the year.

Upper Jhelum Canal.

383. This was the 2nd year of irrigation on this canal. The area irrigated was 177,006 acres against 117,605 acres in the preceding year and was short of the project forecast by 102,994 acres, chiefly owing to irrigation having started a year later than anticipated.

384. The gross income from all sources amounted to Rs 5,37,993 and the working expenses to Rs. 8,27,495, resulting in a loss of Rs. 2,89,502, or 0·64 per cent. on the capital outlay. It may be noted here that the expenditure incurred on this canal is largely in the interests of the Upper Chenab and Lower Bari Doab Canals.

385. The main features of interest of the year have been the steady rising of the supply in the main line, and the growing up of, and the carrying through of, the programme of distributing the winter waters of the Jhelum, Chenab and Ravi rivers between the 5 connected canals (the Upper Jhelum, Lower Jhelum, Upper Chenab, Lower Chenab and Lower Bari Doab Canals).

Lower Jhelum Canal.

386. The area irrigated was 231,872 acres in *kharif* and 533,598 acres in *rabi*, as compared with 232,414 acres and 587,728 acres in the corresponding crops of 1916-17. The decrease in the area irrigated during *rabi* was partly due to the fact that by reason of excessive rainfall a large area was sown as *barani* and ultimately matured without getting canal water and partly to the shortage of labour. Out of the total area of 765,470 acres irrigated 379,739 acres were in proprietary villages and 385,731 acres in Colony villages.

387. The gross receipts and the working expenses were Rs. 44,29,159 and Rs. 9,15,765, respectively, giving a net revenue of Rs. 35,13,394 or 21·65 on the capital outlay at the end of the year. This was 2 per cent. less than that of the preceding year due to—

(*a*) an increase of Rs. 2,92,000 in the capital outlay ;

(*b*) the decrease in the area irrigated in *kharif* 1917 and *rabi* 1916-17 ; the former was due to excessive rainfall, while the latter was attributed in the previous year's report to drought and very low river supplies.

Upper Sutlej Inundation Canals.

388. The net area assessed (*viz.*, 431,028 acres) exceeded by 157,379 and 99,967 acres as compared with the averages of the two triennia ending 1913-14 and 1916-17, respectively.

389. The gross income amounted to Rs. 7,50,234 and working expenses to Rs. 3,82,314, giving a net revenue of Rs. 3,67,920 or 20·24 per cent. on the capital invested. The figures of gross income and net revenue are higher than any during the last 16 years owing to good supply in the river.

Sidhnai Canal.

390. The irrigation effected was 131,207 acres in *kharif* and 187,235 acres in *rabi* as compared with 114,933 and 183,623 acres, respectively, in the corresponding crops of the preceding year. The percentage of the failed crops was 19·97 in *kharif* and 8·29 in *rabi* against 13·95 and 17·7, respectively, in the previous year. The high percentage of remissions in *kharif* was due to rain and floods which were abnormal.

391. The total areas irrigated and assessed were the highest yet recorded on this system, but taking each crop separately the area irrigated was the second largest in both crops whereas that assessed was the highest on record in *rabi* and second highest in *kharif*.

392. The total income from all sources amounted to Rs. 7,01,625 and the working expenses to Rs. 1,58,769, giving a net revenue of Rs. 5,42,856, or 40·75 per cent. on the capital outlay, against Rs. 4,30,737, or 32·25 per cent. in the preceding year.

Indus Inundation Canals.

393. The area irrigated was 140,042 acres in *kharif* and 64,171 acres in *rabi* as compared with 179,941 and 85,217 acres, respectively, in the preceding year. The decrease both in *kharif* and *rabi* is attributable

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to the unprecedented severity of the hill torrent floods of August and September consequent on the excessive rainfall in the Suleman Hills.

394. The total income from all sources and the working expenses amounted to Rs. 4,41,690 and Rs. 3,99,182, respectively, giving a net profit of Rs. 42,508 against Rs. 1,29,705 in the preceding year.

MINOR IRRIGATION WORKS.

Shahpur Imperial Canals.

395. The canals were opened early in May and closed early in September. The canals worked satisfactorily during the *kharif* season. There were hailstorms during the harvest and some damage was done to crops. The area irrigated was 42,633 acres as against 39,075 acres, the average of the previous triennium. Revenue was remitted on 3,115 acres, of which 189 acres were by reason of flooding and 2,926 acres by reason of bad germination.

396. The net revenue of Rs. 75,086 brought a return of 34·77 per cent. on Rs. 2,15,914, the capital outlay up to date.

Ghaggar Canals.

397. The operations of the year resulted in a loss of Rs. 12,165 which is equivalent to 3·23 per cent. on the capital outlay as compared with a loss of Rs. 8,630 or 2·29 per cent. in the previous year. The financial position of these canals is now under consideration.

Lower Sutlej Inundation Canals.

398. The gross area irrigated (365,184 acres) is the second highest on record. The matured area (302,029 acres) is greater than any of the preceding years, except 1916-17 and 1914-15, when it amounted to 320,613 and 347,483 acres, respectively. The failed area was 63,155 acres against 43,271 acres during the preceding year. The increase is almost wholly attributable to excessive rainfall.

399. The net revenue was Rs. 4,16,395 against Rs. 3,87,001 in 1916-17 and an average of Rs. 3,59,892 in the previous triennium.

Chenab Inundation Canals.

400. The river Chenab rose gradually during the month of June and a flood occurred on the 21st. The river fell again towards the end of the month, but rose in July, and the supply was well maintained until the close of the irrigating season.

401. Both the irrigated and assessed areas (229,042 acres and 197,849 acres, respectively) were the highest on record. The net income was Rs. 3,92,373 as against Rs. 2,88,033 in the previous year and an average of Rs. 2,95,174 in the previous triennium. Thus the results of the year's working were very satisfactory.

Muzaffargarh Inundation Canals.

402. The year was an unfortunate one as regards weather, but results are better than might have been expected considering the adverse conditions which prevailed. The area irrigated, *viz.*, 385,075 acres, was the third largest on record.

403. The area matured (330,009 acres) was smaller than the average (349,253 acres) of the previous triennium, due to the high percentage of failed area attributable to flooding and rise of sub-soil water caused by heavy rain in August and September.

404. The net revenue amounted to Rs. 3,64,448 against Rs. 4,02,472 in the preceding year and an average of Rs. 3,13,213 in the previous triennium.

Shahpur Provincial Canals.

405. The area successfully matured and assessed was 23,645 acres as compared with 25,677 acres of the preceding triennium. The decrease was due to heavy rains during August and September 1917 which enabled the zamindars to dispense with canal water for the *rabi* to a large extent.

406. The revenue was remitted on 524 acres due to bad germination and besides this 916 acres were remitted under tenancy rules.

407. The working operations showed a net profit of Rs. 20,826 due to a large increase of 16,366 acres in the figures of area, assessment on which was collected during the year, as compared with the average of the triennium ending 1916-17.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1917.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the year 1917-18.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1917-18.

Stamps.—Report on the Administration of the Stamp Department of the Punjab for the triennium ending 31st March 1918.

Income-tax.—Report on the Income-tax Administration of the Punjab for 1917-18.

Forests.—Progress Report of Forest Administration in the Punjab for 1917-18.

Provincial Revenues.—Audit and Appropriation Report on the Accounts of the Punjab for 1917-18 and Review of the Annual Accounts of the Punjab for the year 1917-18, published in the *Punjab Gazette*, dated 15th November 1918, Supplement, Part II.

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1917-18.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1917-18.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume I—Commercial Statistics.
Volume II—Financial Statistics.
Volume IV—Administrative and Judicial (including area, population and local funds).

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1917-18.

36.—Gross Revenue and Expenditure.

408. The following table shows the receipts under the various heads of revenue excluding revenue from Salt in the year under report :—

(In thousands of rupees.)

Major heads	Imperial.	Provincial.	Total.	+ more — less on figures for 1916-17.
Land Revenue	1,55,91	1,55,91	3,11,82	+ 26,62
Opium	7,42	...	7,42	— 4
Stamps	30,00	30,00	60,00	+ 18
Excise	42,81	42,82	85,63	+ 9,76
Provincial Rates	...	21	21	— 11
Customs	22	...	22	— 1
Income-tax	18,85	17,18	36,03	+ 11,41
Forests	...	21,18	21,18	+ 4,30
Registration	...	3,81	3,81	+ 9
Tributes	1,44	...	1,44	— 2
Interest	2,52	2,47	4,99	— 32
Law and Justice—Courts of Law	...	6,81	6,81	— 9
" " " —Jails	...	6,77	6,77	+ 2,61
Police	...	2,27	2,27	— 44
Education	...	5,25	5,25	+ 3
Medical	...	45	45	+ 5
Sanitation	...	1,27	1,27	+ 11
Agriculture	...	3,32	3,32	+ 82
Scientific and Miscellaneous	...	29	29	— 2
Receipts in aid of Superannuation ...	1,23	86	2,09	— 9
Stationery and Printing	67	1 00	1,67	— 29
Miscellaneous	3,68	7,08	10,76	— 2,30
Irrigation—Major Works	1,89,11	1,89,12	3,78,23	— 18,24
" Minor Works	10,02	1,26	11,28	+ 1,05
Civil Works	89	3,76	4,65	— 43
Transfers between Imperial and Provincial...	47,21	47,21	...	...
Total ...	4,17,56	5,50,30	9,67,86	+ 34,64

409. The gross expenditure excluding expenditure of the Salt, Military, Railway, Post Office and Telegraph Departments and capital expenditure on Canals was as follows :—

(In thousands of rupees.)

Major heads.	Imperial.	Provincial.	Total.	+ more. — less on figures for 1916-17.
Refunds	1,20	1,24	2,44	+ 39
Assignments	59	34	93	— 7
Land Revenue	...	46,59	46,59	— 70
Stamps...	93	93	1,86	+ 9
Excise	1,18	1,18	2,35	+ 3
Income-Tax	17	16	33	+ 6
Forests	...	11,58	11,58	+ 2,23
Registration	...	1,27	1,27	+ 2
Interest	1,86	1,93	3,79	+ 20
General Administration	4,42	12,40	16,82	— 5
Law and Justice—Courts of Law ...	...	44,48	44,48	— 47
„ „ „ —Jails	...	19,44	19,44	+ 1,83
Police	...	66,22	66,22	+ 1,70
Education	...	44,47	44,47	+ 1,68
Ecclesiastical	2,62	...	2,62	+ 17
Medical	...	9,26	9,26	+ 1,23
Sanitation	...	9,81	9,81	+ 1,73
Political	5,92	...	5,92	— 23
Agriculture	...	13,63	13,63	+ 1,22
Scientific and Miscellaneous	...	1,40	1,40	— 8
Pensions, Territorial and Political ...	69	...	69	— 2
Superannuation, &c.	10	25,78	25,88	+ 1,61
Stationery and Printing	20	7,10	7,30	+ 10
Miscellaneous	59	15,20	15,79	+ 10,00
Famine Relief	— 4	— 1	— 5	— 12,56
Irrigation—Major Works	89,53	89,53	1,79,06	+ 5,56
„ Minor Works	8,24	3,33	11,57	+ 86
Civil Works	5,97	51,27	57,24	+ 4,91
Total ...	1,24,17	4,78,53	6,02,70	+ 20,04

37.—Land Revenue.

410. The Land Revenue Report gives the figures for land revenue according to the Agricultural year ending 30th September, whereas the financial year ends on 31st March. There must consequently always be a difference between the total collections as calculated by the Treasury and the yearly returns furnished by the Financial Commissioners' Office.

411. The Land Revenue Report for the year ending 30th September 1917 shows the following figures for collections including those on

account of previous years, comments on which have already been made in Section 10 dealing with demands :—

	Rs.
Fixed Land Revenue	2,40,74,033
Fluctuating Land Revenue	1,38,32,239
Temporarily excluded from fixed Land Revenue Roll ...	74,226
Other Land Revenue	40,32,927
Total ...	4,20,13,425

38.—Irrigation.

412. The total capital invested up to the end of 1917-18 on canals in operation classed as Productive Major Works was Rs. 22,33,05,164. Capital expenditure during the year amounted to Rs. 26,88,971. The income from all sources excluding refunds was Rs. 3,78,03,274. Working expenses totalled Rs. 1,11,03,852. Interest charges amounted to Rs. 74,84,392. The net profit left was Rs. 1,92,15,030 as against Rs. 2,16,57,594 in the previous year.

413. The balance profit on Imperial Canals, Minor Works not classed as Productive, was Rs. 12,36,137 as against Rs. 11,36,719 in 1916-17. Provincial Canals show a profit of Rs. 17,179 as against a deficit of Rs. 1,326 in the preceding year.

39.—Excise and Opium.

414. Notwithstanding interruption of railway goods traffic, affecting their supplies of distilling bases and coal, the 5 Punjab distilleries worked at high pressure, substituting for the Java solidified molasses, country *gur* and molasses and for coal, firewood. The issues of spirit of all classes amounted to 598,481 gallons, an increase of 123,648 gallons or 26 per cent. on the figures for 1916-17. The most noticeable increase was in spiced spirit and denatured spirit. The Amritsar Distillery secured the contract to supply the Sind Province for one year commencing November 1917, with two lakhs proof gallons of country spirit. On the other hand imports into the Punjab from the Rosa Distillery in the United Provinces fell to one-third of the previous year's figures.

415. The year under report was the last of the three for which the system of distillery vend spheres was instituted. When this system was introduced the still power of the provincial distilleries exceeded the provincial demand. It was intended to prevent at first cut-throat competition between distillers and later a combination between them adverse to Government. War conditions have now made it difficult for distillers to meet the calls made on them, while the Sind contract secured by the Amritsar distillery has absorbed a considerable part of the outturn : consequently the system has been discontinued.

416. Consumption of country spirit in 1917-18 amounted to 398,042 gallons, an increase on 1916-17 of 11·2 per cent. The chief reasons are the prosperity of the agricultural classes, the receipt of large remittances from men on military service, increased spending power of labouring and menial classes due to good employment and high wages, increase in number of weddings, decrease in illicit distillation and illegal imports from Native States, and a considerable rise in the prices of imported liquors which stimulated the use of country spirit. Yet, notwithstanding increased consumption, the increase in convictions for drunkenness was very slight.

417. Breweries have again had a prosperous year and have worked up to their utmost capacity. Issues of beer amounted to 2,783,222 gallons as against 2,272,192 in 1916-17, and the duty realised was Rs. 7,44,741 against Rs. 4,79,269. The apparently disproportionate increase in the duty realised is explained by the fact that an unusually large sum for the last quarter of the year 1916-17 was credited in the accounts for 1917-18. The consumption of imported beer fell

from 68,276 gallons to 60,054 gallons; while that of Indian-made beer rose from 1,191,515 to 1,571,597 gallons mainly due to the number of troops stationed in the Punjab. While beer is not, among the general population of the Punjab, replacing country spirit, it is said to be drunk by the poorer classes who cannot afford country spirit or owing to its cheapness and cooling effects are taking to it as an extra to country spirit.

418. The consumption of excise opium decreased from 51,007 seers to 50,445 seers, but that of other opium slightly increased, *viz.*, from 10,147 to 10,315 seers. The total receipts from opium amounted to Rs. 18,32,425, an increase of Rs. 1,77,509 or 10·7 per cent. During the year the issue price of excise opium was raised from Rs. 25 to Rs. 27-8-0, resulting in a net gain of Rs. 1,18,419; while license fees increased by Rs. 73,985 notwithstanding that action had been taken to restrict issues of excise opium. The rise in license fees furnishes an indication of increased illicit transactions. Further action to check them and control the trade in opium is under consideration

419. The issues of charas from Punjab warehouses declined from 3,246 maunds in 1916-17 to 3,034 maunds in 1917-18. The duty was, however, enhanced on 1st April 1916 from Rs. 12 to Rs. 14 per seer and realised Rs. 60,19,146, an increase of Rs. 58,609 on the previous year.

420. The consumption of bhang rose from 93,339 seers in 1916-17 to 95,414 seers in the year under report. Variations in sales are attributed to the influx or absence of classes accustomed to its use, such as *faqirs* and the followers of troops : the rise in the price of other intoxicants also contributed to an increased consumption of bhang by the poorer classes. There was a decline of Rs. 2,707 in the receipts on account of duty owing to a fall in the duty-paid bhang exported from the province. The number of retail hemp drug licenses was further reduced by 13.

421. The sale of cocaine to the public declined from 8,862 grains to 7,613 grains. Owing to the war and the consequent restricted imports there has been a considerable rise in the price of cocaine. At the same time there is now less illicit traffic in the drug.

40.—Salt Revenue.

422. [Owing to the Report on the Administration of the Northern India Salt Revenue Department for 1917-18 having been delayed, no remarks can be made on this subject.]

41.—Stamp Revenue.

423. Receipts under the Stamp and Court Fees Acts contributed Rs. 60,06,794 to the State revenues, a sum exceeding the income of the previous year by Rs 19,660. Of the total receipts of the year Rs. 38,31,589 were derived from the sale of judicial or court-fee stamps. The receipts from this source show a decline of Rs. 12,524 as compared with those of the previous year. The sale of non-judicial stamps contributed Rs. 20,89,891 towards the total revenue of the year, an increase of Rs. 33,747. The greater portion of the income is derived from the sale of non-judicial impressed sheets, the receipts from which rose from Rs. 15,90,048 to Rs. 16,38,705. Increases in the sale of impressed sheets occurred in 18 districts of the Province ; the remaining 10 showing decreases which ranged from Rs. 172 to Rs. 4,844, the net result being an increase of Rs. 48,657. The increases are generally attributable to the execution of a larger number of conveyances and bonds.

424. The expenditure of the Department rose from Rs. 2,30,033 in 1916-17 to Rs. 2,36,859 in the year under report.

42.—Income-tax.

General. 425. High prices of agricultural and industrial products, a lucrative market for imported goods and improved methods of assessment in a number of districts affected the collections of the year which amounted to Rs. 32,37,375, or 34 per cent. more than in the last year of the preceding triennium.

426. In the case of salary paid by companies the collections under section 9 (1) increased by 51 per cent., the districts of Lahore and Simla being responsible for the increase. Arrangements for collections under section 9 (2) worked satisfactorily, but there was no noticeable increase in the tax collected under this section. Tax on salaries.

427. The profits of companies yielded a tax amounting to Rs. 4,38,215, a satisfactory increase on the previous year's total of Rs. 1,40,666. Lahore, which collected the tax not only from local companies but also from the Dhariwal Mills, accounts for over 80 per cent. of the collections. Two companies in Simla and one in Rawalpindi paid each about Rs. 15,000 as tax. In the rest of the province the collections amounted to only 5 per cent of the total. Profits of companies.

428. The amount realized under the head of interest on securities increased by nearly 50 per cent. and the tax realized on the securities issued by companies was nearly doubled. Interest on securities.

429. Under Part IV collections amounting to Rs. 21,84,701 were made from 35,917 assessees. On the previous year's figures this amounts to an increase of 28 per cent. in collections and of 16 per cent. in the number of assessees. Other sources.

430. Uncollected balances amount to the considerable sum of Rs. 4,30,262 including Rs. 3,18,252 assessed under Part IV in 1917-18. The large outstandings in Amritsar, Lahore, Simla and Ambala were the result of delay in assessment and decision of objections due to the employment of the special assessing agency which had to take up several districts in succession.

431. The special assessment staff of four naib-tahsildars, two munims, two clerks and six peons, employed in 1917-18, under the supervision of an Extra Assistant Commissioner, assessed the towns of Lahore, Amritsar, Dalhousie, Jullundur City and Cantonment, Hoshiarpur, Ambala City and Cantonment, Karnal, Simla and Kasauli, and secured an increase of the final demand from Rs. 6,25,521 to Rs. 10,08,170, while its total cost was only Rs. 20,081. Special assessment staff.

43.—Forest Revenue.

432. The revenue of the Forest year ending June 30th, 1918, was Rs. 21·77 lakhs and the expenditure Rs. 12·42 lakhs, yielding a cash surplus of Rs. 9·35 lakhs. The revenue and expenditure were classified as follows :—

Revenue.		*Expenditure.*	
I.—Timber and other produce removed from the forests by Government Agency	... 9·66 lakhs.	A.—Extension, constitution, improvement and exploitation of the forest property	... 7·52 lakhs.
II.—Timber and other produce removed from the forests by consumers or purchasers	... 8·65 „	B.—Administrative, executive and protective charges	4·90 „
III.—Drift and waif wood and confiscated forest produce	... 0·35 lakhs.		12·42 „
IV.—Revenue from forests not managed by Government	... 0·01 lakhs.	Cash surplus	9·35 „
V.—Miscellaneous	... 3·10 „		
	21·77 „		21·77 „

433. The revenue rose to Rs. 4·84 lakhs and the expenditure Rs. 2·75 lakhs. The increase in revenue was chiefly due to an increased outturn of and higher prices obtained for nearly all kinds of produce. The increase in expenditure was mainly due to departmental working in Bashahr, Rawalpindi and Kangra, as well as to the expansion of the resin industry.

434. The true results of the year's working show a surplus of Rs. 16·66 lakhs, *viz.*—

	Lakhs. Rs.
Cash surplus	9·35
Increase in value of stock	4·65
Increase in outstandings of revenue	0·05
Increase in outstandings against contractors and disbursers	1·47
Capital expenditure less interest	1·14
	16·66

44.—Provincial Revenue and Expenditure.

435. The Provincial shares of the Revenue raised and expenditure incurred in the Punjab during the last two years, with the opening and closing balances in each year, are shown in the table below :—

(In thousands of rupees.)

	Actuals, 1916-17.	Actuals, 1917-18.	Difference between actuals, 1916-17 and 1917-18.
Opening balance	63,55	1,22,75	+ 59,20
Revenue	5,17,89	5,50,30	+ 32,41
Expenditure	4,58,69	4,78,53	− 19,84
Closing balance...	1,22,75	1,94,52	+ 71,77

436. The accounts of 1917-18 show an almost uniform improvement on those of 1916-17 throughout all the heads of revenue. The important variations are given below :—

(In thousands of rupees.)	(+ more ; − less.)
I—Land Revenue	+ 13,31
V—Excise	+ 4,89
VIII—Income-tax	+ 4,87
IX—Forest	+ 4,30
XV-B—Law and Justice (Jails)	+ 2,61
XXI-A—Agriculture	+ 82
XXV—Miscellaneous	+ 1,58
XXIX—Irrigation Major Works—	
Direct	− 2,93
Indirect	− 6,19
XXX—Irrigation Minor Works	+ 63
Transfers	+ 9,73

437. The increase under Land Revenue is due to the recovery of suspended revenue of past years, and to a reduction in the ordinary programme of suspensions ; favourable harvest prospects and high prices enabled the zamindar to pay arrears and to meet the full demand—a demand which is gradually growing because of progressive enhancements and the extension of irrigation. The Excise receipts reflect the general prosperity of the province ; the consumption of malt liquors has risen in consequence of the large numbers of troops stationed in the province ; and this, coupled with the increased duty and reduction of imports from overseas, accounts for an increase of Rs. 8,66,000 under the sub-head. The normal growth of income-tax has been stimulated by the efforts of the special assessing agency which is systematically rounding up defaulters and exacting a proper contribution from those who so far have been evading their full share of the burden. The high prices of, and the heavy demand for wood and other forest products, the speeding up of felling programmes and the extension of leases for temporary cultivation are the main reasons for the growth of revenue under the Forest head. The increase under " Jails " is composed largely of arrear payments for blankets supplied in 1916-17 but not paid for till 1917-18. The betterment of income under " XXI-A—Agriculture "-is partly nominal, representing as it does certain book transactions in connection with the purchase and sale of seed. The repayment of

one lakh advanced to the Imperial Relief Fund in connection with the opening of cheap grain shops by municipalities, and the income resulting from the introduction of the new copying agency scheme explain the difference under "XXV—Miscellaneous." Owing to the heavy monsoon of 1917 the spring harvest of 1917-18 was to some extent independent of canal irrigation; while in certain irrigated areas water logging-hampered cultivation. Thus the direct receipts under "XXIX—Irrigation Major Works" show a slight decrease. Similar reasons are probably responsible for the deficiency in the indirect receipts. Under Irrigation Minor Works the extension of irrigation from the Kitchin-Irving and other smaller canals explains the growth in income. The large increase under transfers is more than covered by the special wheat profits grant of 11·7 lakhs.

438. Under expenditure heads the position is shown by the following figures:—

(In thousands of rupees).	(+more; −less)
3—Land Revenue	− 70
11—Forest	+ 2,23
19-A—Law and Justice	− 47
19-B—Jails	+ 1,83
20—Police	+ 1,70
22—Education	+ 1,68
24-A—Medical	+ 1,23
24-B—Sanitation	+ 1,73
26-A—Agriculture	+ 1,22
29—Superannuation	+ 1,53
30—Stationery and Printing	+ 7
32—Miscellaneous	+ 9,93
33—Famine Relief	− 5,57
42—Irrigation Major Works	+ 2,78
43—Irrigation Minor Works—	
Civil	− 30
Public Works Department	+ 99
45—Civil Works—	
Civil	− 6,77
Public Works Department	+ 8,24

439. Savings under Survey and Settlement (owing to an overestimate of the cost of the Sind-Sagar Survey), under Grain Compensation and Exchange Compensation Allowances and postponement of the formation of the new Sheikhupura District have affected the expenditure under "3—Land Revenue." The reduction of charges under "19-A—Law and Justice" is due to economies in contingencies, salaries, diet money of witnesses and to the transfer to "3—Land Revenue" of certain charges in connection with the process-serving establishment. The only other heads exhibiting a reduction of expenditure are "33—Famine Relief," "43—Irrigation Works, Minor, in charge of Civil Officers" and "45—Civil Works, in charge of Civil Officers." The reasons for the reduced expenditure under Famine Relief are obvious, the plentiful rains preventing any scarcity of fodder. The assignments to District Boards for the upkeep of minor works having been absorbed in the new consolidated grants the expenditure under the head "43—Irrigation" has been correspondingly reduced; and similarly under "45—Civil Works, in charge of Civil Officers," the saving of nearly 7 lakhs is due to the transfer of provision for grants to District Boards from this head to "32—Miscellaneous." Most of the other expenditure heads record increases. In the case of Forests additional expenditure necessary for starting departmental extraction of timber in the Bashahr Division and for increasing the supply of wood to the army in Rawalpindi Division, extra stores for the Jallo Resin Factory and larger payments of water rate for the irrigated plantations have, despite certain economies on salaries of officers on deputation, etc., caused a rise in the figures. Under head "19-B—Jails" the high range of prices is responsible for the additional expenditure incurred on clothing and bedding of prisoners, while Jail manufactures continue to expand to meet military requirements.

More than half of the increase under "20—Police" is due to the higher expenditure under District Executive Force in which minor head is included provision for the reclamation of Criminal tribes. The payment of certain arrears to the East Indian Railway on account of the rent of quarters for watch and ward staff accounts for the enhanced expenditure on Railway Police. Under the head "22—Education" the increase of one lakh in grants-in-aid, which forms the major part of the total excess, is somewhat obscured by the change in accounts procedure according to which payments in support of municipal or local schools are classified under grants-in-aid. A rise of Rs. 98,000 under Hospitals and Dispensaries is the main cause of the larger figures under "24-A—Medical." The figures for "24-B—Sanitation" have been affected by the grant of an additional lakh to the Sanitary Board and of Rs. 40,000 to the Simla Municipal Committee in connection with the Bemloe Sewage Scheme. The wheat profits windfall gave Government the opportunity of spending more on agriculture, and the figures of the year under report have been increased still further by an excess in the purchase of serum for the Veterinary Department. The attractions of the War Loan have induced pensioners to commute portions of their pensions with a view to investment and have caused a certain inflation in the figures for Superannuation Allowances and Pensions. Increased prices account for the excess under "30—Stationery and Printing." The large difference under "32—Miscellaneous" is counterbalanced by a saving under "45—Civil Works," due to the change in classification of grants to District Boards. The rate of interest on debt has again increased, adding nearly two lakhs to the charges payable by this province on this account. Heavy expenditure on repairs owing to floods and certain accounts adjustments have also helped to make the total of expenditure under "42—Irrigation Major Works" heavier than in 1916-17. Under "43—Irrigation Minor Works, in charge of Public Works Department," the Bhakra dam scheme, the investigation of a proposal to construct a small canal in the Pind Dadan Khan Tahsil of the Jhelum District and the transfer to this head of the charges for the Kitchin-Irving Canal and Dane Dam and Canal have added to the expenditure, while the figures for "45—Civil Works, in charge of Public Works Department Officers," have been affected by the purchase of houses in Simla for officers, and by the expenditure on repairing the damage done by the earthquake in Dharmsala.

45.—Local Funds.

440. The gross income of District Boards was Rs. 83,16,600 which exceeded by over 4¾ lakhs that of the previous year and was the highest yet attained. Only 1½ lakhs of the increase was accounted for by local rate, the enhancements in the rate not having had their full effect during the year.

441. Variations in income and expenditure under the more important heads have already been discussed in section 24.

46.—Municipal Funds.

442. The total receipts of municipalities in 1917-18 amounted to no less than Rs. 98,41,909 as compared with Rs. 82,00,418 in the previous year. This striking increase is accounted for partly by the increased receipts from octroi already referred to in section 25 and also by larger Government contributions. The figures are also swelled by the Lahore Municipal Committee's withdrawal from deposit with a bank of a sum of eight lakhs, which was subsequently invested in the War Loan. Rs. 76,669 was realized as interest on investments during the year as against half a lakh in 1916-17. There have been slight increases in the proceeds of special taxes and a slight decline in receipts from water-rate at Rs. 62,813. Sale-proceeds of water have, however, risen to some small extent. Fees from educational institutions have increased by over Rs. 2,000 to Rs. 1,71,002, but receipts from medical institutions (Rs. 25,551) are practically stationary. There has been a substantial increase in Government grants from Rs. 7,38,203 to Rs. 9,44,281.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Census—Report on the census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishen Kaul, C.I.E.

Births and Deaths— } Report on the Sanitary Administration of the Punjab and
Sanitation— } Proceedings of Sanitary Board for the year 1917.

Emigration—Census Report as above.

Medical Relief— { Report of the working of the Charitable Dispensaries in the Punjab for the year 1917.
Report of the Pasteur Institute, Kasauli, for the year 1917.
Report on the working of the Punjab Lunatic Asylum for the year 1917.

Vaccination—Report on Vaccination in the Punjab for the year 1917-18.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume III—Public Health.

47.—Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1911-12.]

48.—Births and Deaths.

General.

443. The rough estimated population prepared by adding births and subtracting deaths since the last census report works out in 1917 to 21,005,233 (11,506,888 males and 9,498,345 females) as against the census population of 19,337,146 (10,608,101 and 8,729,045). Calculated on the population thus estimated the birth rate was 41·7, or 3·6 less than the rate calculated on the census population, and similarly the death-rate at 34·9 was less by 3·0. The estimated population is in excess in all the districts of the Province except Simla.

444. Previous to the three last months of the year when malaria caused a high death-rate, the year 1917 was a healthy one, the birth-rate was average and the death-rate low. Cholera prevailed only to a slight extent, small-pox gave the lowest rate in recent years, plague, though worse than in 1916, showed a less rate than that recorded for some years, while the rates under other heads of mortality were about the average.

Births.

445. The birth-rate amounted to 45·3 *per mille*, *i.e.*, ·3 less than it was last year and ·1 in excess of the quinquennial average. The actual number of births was 876,733, of which 459,273 were males and 417,460 females. Though less than last year the birth-rate is quite satisfactory. In the first 5 months and in October the births were in excess, from June to September they were considerably less, slightly less in November and a good deal less in December. The birth-rate in the 38 principal towns of the Province, those with a population of 10,000 or upwards, amounted to 46·2 *per mille*; this rate is 0·8 less than it was in 1916 and 1·1 more than the average for the previous 5 years. Among districts Rohtak this year recorded the highest birth-rate, namely, 55·4. The lowest rate as usual was recorded in Simla 22·2, while next in order came Dera Ghazi Khan with 28·1

Deaths.

446. The death-rate during the year under report amounted to 37·9, which is 7·2 *per mille* in excess of the rate recorded in the year

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preceding and 6·7 compared with the average for the previous 5 years. The actual numbers were 733,109 deaths (378,785 males and 354,324 females). This high death-rate is due entirely to fevers which accounted for no less than about 70 per cent. of the total deaths registered. The rates for dysentery and diarrhœa remained the same as in the previous year, while under cholera, small-pox and all other causes there was a slight decrease; under the other heads of mortality, fevers being omitted, there was a slight increase.

447. With seven exceptions, Karnal, Hoshiarpur, Jullundur, Ludhiana, Gujrat, Jhelum and Rawalpindi, the death-rate by districts was in excess of the average for the previous 5 years. The highest death-rate—52·0—was recorded in Gurgaon (in which district, however, the birth-rate was also very high—54·5). The lowest rate was recorded as is usual in Simla, 26·3, but this was followed closely by 28·7 in Jullundur and 28·9 in Hoshiarpur.

448. The healthiest month of the year was February, when the rate recorded was 1·91; this was closely followed by 2·04 in August, 2·06 in July, 2·20 in June, 2·21 in March and April, 2·35 in May, 2·45 in January and 2·94 in September. The first indication that malaria was likely to be widespread and likely to assume an epidemic form was the increased death-rate in September, followed by a higher one in October, 5·86. The highest rate recorded was in November 6·75, but the rate again fell to 4·92 in December. The rate in the last quarter equalled the rate recorded in the first 8 months of the year. Mortality among infants is still very high, the figures standing at 267·5 for males and 256·6 for females per thousand. The rural and urban death-rates were 37·43 and 42·77, respectively, as compared with 30·28 and 34·98 last year. Amritsar recorded the highest death-rate among the three largest towns of the Province, 66·58 as against 39·94 in the previous year and 41·63 the quinquennial average. Multan came next with 52·67 against rates of 35·21 and 32·22 for last year and the quinquennial average, while at Lahore the corresponding rates were 44·40, 36·47 and 33·98. These high rates were due to excessive fever mortality in Lahore and Multan and fever and respiratory diseases in Amritsar.

Cholera.

449. Cholera showed no marked prevalence. Altogether there were 1,365 deaths, *i.e.*, 286 less than in the previous year, the mortality rate being 0·07 *per mille* as compared with 0·09 in 1916 and 0·30 the average for the previous five years. This good result is doubtless very greatly due to the early preventive measures taken and to better knowledge of the manner in which the disease is spread. With the exception of three deaths the Province was free from cholera in the first half of the year, but it assumed serious proportions in the months of September and October when 628 and 463 deaths, respectively, were recorded. In November there were 86 deaths and in December the Province became free. Only in one instance was an outbreak traced directly to the Hardwar pilgrim route, but it is probable that the epidemic at Jagadhri originated in that vicinity. An outbreak of cholera in Multan caused some anxiety to the Military Department on account of the Army Clothing Factory there, as it was reported that some of the employees had contracted the disease and it was thought that the clothing might become contaminated; successful measures, however, were taken to check the disease.

450. The conditions prevailing at Multan are very unsatisfactory, the drainage and water-supply are bad and nothing but the introduction of a proper drainage system and a piped water-supply, for which arrangements are being made, can protect the town from recurrences of outbreaks of this and other diseases.

451. At Jagadhri great difficulty was found, as at Panipat last year, in discovering and disinfecting the numerous wells, public and private. The sub-soil water at Jagadhri is so near the surface that it costs little to sink a well and almost every man can afford the luxury of having his own water-supply, and incidentally one that can easily be fouled, in his own compound. The heavy rains this year raised the sub-soil level so high and

caused such a large amount of surface flow into the badly constructed and protected wells as to make it extremely difficult to keep them free from contamination and rendered it necessary to disinfect them repeatedly before the desired effect was obtained. If a piped water-supply is not introduced into a town, where such conditions prevail, the next best thing is to encourage use the of tube wells ; in some places, as in Hoshiarpur and Ferozepore, many of the people are well aware of the protection so afforded against water-borne diseases, but owing to the war the increased cost of these wells has made their extended use almost prohibitive.

452. The total deaths from small-pox amounted to 1,417 as compared with 2,886 during the previous year. The death-rate amounted to 0·07 per 1,000 of population as against 0·15 in 1916 and 0·79 for the previous five years. This year's rate is the lowest on record since the introduction of the system of registration of births and deaths in this Province. The mortality rate from small-pox was highest in the districts of Gurgaon and Lahore. Small-pox.

453. There were 9,724 deaths in the Province compared with 4,151 in the preceding year. It was not a bad year on the whole, but there were as many as 4,084 deaths in the last two months, *i.e.*, nearly half the total, indicating from experience a bad epidemic in 1918. Rawalpindi and Jhelum in the north-west, Ambala in the east, and the districts of Lahore, Jullundur, Gurdaspur, Ludhiana and Gujranwala in the centre were worst infected, accounting for more than 76 per cent. of the total mortality. The case mortality was 69 per cent. as compared with 79 per cent. last year. The disease was chiefly bubonic in type. Plague.

454. There was a marked change in the seasonal curve. Usually there is a gradual rise continuing from January to April and then an abrupt fall. This year the rise extended over May, and though it dropped in June it was not till July that there was a very definite fall. This was associated with the unusual rainfall in the late spring. The fall in the seasonal curve reached its lowest in August when there were only 87 deaths; but from thence onwards the rise was much steeper than would generally be expected. The fact that infection was widely distributed probably accounted for this result, since six districts, *viz.*, Jullundur, Ludhiana, Lahore, Gurdaspur, Gujranwala and Rawalpindi, were rather badly affected.

As usual the measures depended upon were—

(*a*) ratting by means of traps, poison and smoke apparatus—concentrated round infected areas and in infected places during epidemics and in selected late infected villages during the off season,

(*b*) cresol fumigation and inoculation, where possible, during infection, and

(*c*) in some districts evacuation.

455. The city of Rawalpindi was, as usual, an important centre for the distribution of the disease. Barium Carbonate was used throughout the year as a rat poison with satisfactory results.

456. Under "Fevers" a total of 510,812 deaths was registered against 376,003 in 1916, showing an increase of 134,809 deaths. The death-rate was 26·42 against 19·44 in 1916 and a quinquennial mean of 16·68. The mortality from fevers was the highest on record since 1908, in which year it amounted to 697,058. The largest number of deaths was recorded in the last quarter of the year. The fever death-rate in all the districts in the province, except Kangra and Rawalpindi, was higher than that recorded in the previous year. The highest death-rate was recorded in Muzaffargarh 43·48, Multan coming next with 41·52, Gujranwala 41·36, Dera Ghazi Khan 40·85 and Montgomery 40·63. Fevers.

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457. The increased mortality in those districts in the Province which showed a higher death-rate from fevers is attributable to the prevalence of malarial fever in an epidemic form in the last quarter of the year as the result of the excessive monsoon rainfall.

458. The urban and rural death rates from fevers were 21·46 and 26·91 compared with 14·87 and 19·90 in the previous year. These rates were lower than those in 1908 when they were 32·53 and 34·90. The three largest towns in the Punjab—Multan, Amritsar and Lahore—recorded rates of 30·46, 29·95 and 25·89, respectively, as against 15·78, 13·57 and 21·13 in the previous year and 23·80, 68·16 and 33·69 in 1908. It will be observed that in Multan the death-rate was very high, even higher than in 1908, and the chief cause of this increase was the very exceptional rainfall which amounted to 19·83 inches against 6·25 inches in 1916. No such heavy fall has been recorded in Multan in the last 20 years, for which period only are records available. The high fever mortality rate extended to the whole of the Multan Division, and it is of common knowledge that the country to the south-east, Bahawalpur and Sindh, participated, if anything to a greater extent, in this disastrous result of an exceptional autumnal rainfall occurring in what would be described, ordinarily, as an arid region.

49.—Emigration and Immigration.

459. Since the outbreak of war the passports system has been made universal and, except in the case of travellers from or to Ceylon, no one can now enter or leave India without a passport. Further, natives of India are prohibited from departing by sea out of British India for the purpose of, or with the intention of, labouring for hire in any country beyond the limits of India. This regulation is subject to certain exceptions. The emigration of Indians and their families to East Africa, Mauritius and the Federated Malay States is otherwise generally permitted, provided that the intending emigrants are of good character and antecedents, and that they are travelling for *bonâ fide* business reasons. But members of fighting classes in the Province are not permitted to leave the country for the purpose of obtaining employment in Colonial Police Forces, recruiting for which is prohibited during the war. Indians who wish to enter Mesopotamia must prove that the business which they propose to undertake in that country is such that benefit will accrue therefrom to the Expeditionary Forces employed there. In the case of Siam, the approval of His Majesty's Minister at Bangkok has to be obtained to the entry of any person into the country before a passport is granted to him.

50.—Medical Relief.

General.

460. The Medical Department, already much depleted, has had to meet further demands on its personnel for military service during the year, but its members have not spared themselves in combating the severe malaria epidemic that prevailed in the latter part of the year, and have cheerfully discharged the other additional duties that war conditions have forced upon them. While the Assistant Surgeons have shown themselves responsive to the call for volunteers for military service, it is a matter for deep regret that the same cannot be said of the Sub-Assistant Surgeons, whose general unwillingness to volunteer for field service outside India has come to be recognized as a standing reproach to their class.

Dispensaries.

461. Six new dispensaries were added during 1917, making the total number of institutions at the end of the year 480, representing roughly only one dispensary for every 41,000 of the population. The number is still decidedly inadequate in many districts.

Patients.

462. The total number of patients treated during the year was 5,440,696 (96,019 in-patients and 5,344,677 out-patients) against 5,051,811 (94,285 in-patients and 4,957,526 out-patients) in 1916, an increase of 388,885, of whom 1,734 were in-patients and 387,151 out-patients. Most districts contribute towards this increase.

463. The following abstract exhibits the more important diseases and conditions for which patients attended dispensaries during the year :— Statistics of disease.

Cholera	436
Dysentery	78,841
Enteric fever	2,008
Rheumatic fever and Rheumatism	87,655
Small-pox	170
Tubercle of the lung	4,582
Other tubercular diseases	4,519
Diseases of the Eye	1,031,151
Diseases of the Ear	434,202
Diseases of the Nose	26,409
Dyspepsia	296,238
Diarrhœa	54,352
All other diseases of the digestive system ...	552,138
Ulcers	413,119
Other diseases of the Skin	505,281
Injuries, general and local	209,551

464. One million six thousand eight hundred and sixty-six persons were treated for malaria at fixed hospitals and dispensaries and 97,357 by itinerating dispensaries; but in badly affected districts the people could not go to dispensaries for treatment, nor could the itinerating dispensaries reach them owing to the roads being rendered impassable through floods. Deaths from fevers according to the figures furnished by the Sanitary Commissioner numbered 510,812. Compared with 1916 there was a rise of 2,703 in-door and 345,702 out-door patients treated for malaria. As it became apparent that the heavy monsoon rains would be followed by an epidemic of malaria special measures were undertaken to cope with it. Quinine was freely issued, and one or more Sub-Assistant Surgeons provided with medical panniers were detailed to itinerate in each of the malarious districts: in all 26 itinerating dispensaries were put into operation.

465. Two hundred and fifty thousand six hundred and ninety-one operations were performed as against 266,475 in 1916. Of this number selected operations totalled 39,046 as compared with 40,642 in 1916, while the number of patients operated upon was 242,555 against 259,331. Much of this falling-off in selected operations performed was due to the widespread prevalence of malaria at a time when cases chiefly resort to dispensaries for operations. The same remarks apply to the very considerable reduction in minor operations; but in each case it was mainly owing to the reduction in the number of Assistant Surgeons available for civil work, due to their having joined the Military Department and to the increased time given to recruiting work. Of the 242,555 patients operated upon only 527 died, a percentage of ·22 as compared with ·20 of the previous year. Surgery.

466. The districts in which the largest number of selected operations were performed were Ferozepore 9,906, Jullundur 2,861, Karnal 2,429, Amritsar 2,254, Gurgaon 1,731, Shahpur 1,628 and Hissar 1,534. Of the selected operations performed, extraction of the lens for cataract accounted for 14,778. Altogether 11,195 patients were operated upon and nearly 95 per cent. are reported to have obtained good vision.

467. The total income of dispensaries fell from Rs. 16,43,273 in 1916 to Rs. 16,23,678 in 1917. There is a falling-off of Rs. 9,102 in Municipal contributions and Rs. 53,521 under head "Miscellaneous receipts." Government and local fund contributions, however, rose from Rs. 1,32,623 and Rs. 5,39,997 in 1916 to Rs. 1,54,724 and Rs. 5,49,428 in 1917, respectively. The increase in both cases is due to the rise in the cost of English Income and expenditure.

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medicines, and high cost of living generally. The income from subscriptions amounted to Rs. 1,10,622, of which 60 per cent. was contributed by Europeans and 40 per cent. by Indians. The system of charging fees from the well to-do has not yet met with any measure of success. The total expenditure during the year was Rs. 14,69,492 against Rs. 14,50,679 in 1916. Although there was a total increase of Rs. 18,813 the expenditure on new buildings and repairs fell by Rs. 75,907 as, owing to the rise in the cost of building material and scarcity of labour, building operations had in many instances to be suspended. Expenditure on European medicines which was Rs. 2,35,325 in 1916 rose as a direct result of the war to Rs. 2,89,991. There was no marked rise in expenditure in the case of bazar medicines.

Female medical aid and education.

468. The Punjab Medical School for Women, Ludhiana, continued to meet the demands made upon it for trained assistance for service in Women's Hospital Wards and Dispensaries. The results for the final M. P. L. Diploma examinations were very satisfactory, all six candidates who entered for the examinations being successful. The number of non-Christians who, after much seeking, have been found sufficiently well educated and willing to go in for a medical education has been very small; only two such, a Hindu and a Muhammadan, were registered during the year. At the end of the year, of the total of 152 students in the school and hospital, only 31 were non-Christians (3 in the M. P. L., 1 in the Pharmacy and 27 in the Midwife class). For a considerable time most of the women qualified assistants must necessarily be Christian. A post-graduate course for women Sub-Assistant Surgeons was held at Simla during June and July at which lectures and demonstrations were given. At the end of the course, which proved a great success, examinations were held and prizes awarded to successful candidates.

469. Classes for the training of Indian midwives were carried on at Bhiwani (Hissar District), Ludhiana, Ferozepore, Lahore, Amritsar and Multan. The Victoria Memorial Scholarship assists the Lahore and Amritsar Classes; the others are maintained from funds made available by local bodies. The scheme for the establishment of a Central Training School for midwives at Amritsar, as also one for providing similar schools at local centres, are now before the Local Government, and although it is not altogether certain that such schemes will be by any means an adequate solution of the problem, they at least form a basis on which to found larger and more thorough projects in the future.

470. Meantime the number of women (excluding children) attending hospitals continues to increase, the figures for this year being 30,760 in-patients, and a daily average of 7,105 out-patients.

Military Dressers.

471. The training of young men as Military Dressers for work with Indian troops overseas continued throughout the year. At the end of 1916 the districts of Ferozepore, Amritsar, Gurdaspur, Gujranwala, Gujrat and Sialkot were engaged in this work, but other districts took it up and new centres were opened at Mianwali, Montgomery, Jhelum, Hissar, Rohtak, Montgomery, Dharmsala, Jullundur and Sargodha and more recently at Rawalpindi and Hoshiarpur. By the end of 1917 14 districts were training men; and between them they had in all turned out 682 dressers since the scheme was initiated. Of this number 427 were accepted by the Military Department and 162 were under training on 31st December. The cost of scholarships during training amounted to Rs. 29,640, which was met from subscriptions from the public, District Boards and Red Cross Fund.

Departmental institutions.

472. The total number of patients treated in departmental institutions was 7,831 in-door and 708,490 out-door, and 17,142 operations were performed. Useful work continues to be done by those canal dispensaries which are open to the public.

Non-aided dispensaries.

473. At the non-aided dispensaries which furnished statistics 44,348 males and 46,093 females were treated, and 3,740 operations of all kinds were performed: these dispensaries all belong to Missionary bodies and the number of them fluctuates yearly.

PUNJAB LUNATIC ASYLUM.

474. The rise in the number of inmates and the daily average strength of the Asylum continues. The latter which amounted to 837·03 was the highest on record. There was an appreciable decrease as compared with last year in the number of patients discharged as "cured," but the number of those discharged as "improved" has increased.

475. A special feature was the number of military patients—123, admitted from the various expeditionary forces; as many of them were only slightly affected by shell-shock or by privation they made a rapid recovery.

476. There was no epidemic of disease during the triennium and the general health of the patients was good. The daily number of sick—about 10 per cent. of the population—is about the same as in previous years and may be regarded as creditably low. A more disquieting phenomenon has been the rise in the death rate, due especially to tubercle and pneumonia, but the autumns of 1916 and 1917 were both unhealthy and tended further to lower the vitality of a class already very susceptible to disease.

477. Every effort continues to be made to provide occupation for the patients, and the advent of the military patients has stimulated the popularity of gymnastics. It is a matter for satisfaction that 50 per cent. of the inmates are now provided with regular work, and that the garden continues to provide all the vegetables the institution requires.

478. The difficulty of accommodation is becoming acute: the necessity for establishing a separate enclosure solely for criminal lunatics has been recognised and the question of acquiring land for the purpose is receiving the attention of Government.

THE PASTEUR INSTITUTE, KASAULI.

479. The number of persons inoculated against rabies at the Pasteur Institute, Kasauli, was 5,206, out of which large number only 44 cases were classed as failures; of those treated, 382 were Europeans and 4,824 were Indians. As the provincial laboratory of the Punjab, the Institute was also called upon to examine and report on 1,560 cases as compared with 988 in the previous year.

51.—Sanitation.

480. The Sanitary Board met five times, twice in Lahore, twice in Simla and once in Montgomery. The balance of Rs. 1,39,768 was fully utilized. A fresh grant of 4 lakhs was placed at the disposal of the Sanitary Board for allotment during 1917-18, and from this grants-in-aid aggregating Rs. 30,506 were made up to 31st December 1917, leaving a balance of Rs. 3,69,494 which will be accounted for in the next year's report. The whole of the grant of 4 lakhs for 1917-18 was fully utilized as also a sum of Rs. 84,111, out of an additional grant of one lakh placed at the disposal of the Board. The sphere of the work of the Board was extended in that Government has referred a number of cases for its opinion which have required no little deliberation and discussion. **Sanitary Board.**

481. The Board is on the whole satisfied that there has been some advance in the demand for the sanitation of villages, especially in the Sialkot District where a number of small schemes of improvement have been carried out with funds partly provided by the localities concerned. It is, however, extremely difficult to get villagers to change their customs, and until they themselves show some inclination to improvement it is hardly possible to help them. **Village sanitation.**

482. The annual grant of Rs. 200, which has been given to the Society for Promoting Scientific Knowledge since 3rd October 1911, was increased by Government from the 1st April 1917 to Rs. 1,000 per annum. The Sanitary Board gave a grant of Rs. 23,139 towards the erection of a building and equipment of a building consisting of a lecture hall to **Society for Promoting Scientific Knowledge.**

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accommodate 500 persons, offices, class rooms and sanitary museum, while the site was given by the municipality on a nominal rental. The building was completed and opened in November 1917.

52.—Vaccination.

483. The cost of the department amounted to Rs. 1,30,591, a decrease of Rs. 12,583, compared with the figures for the previous year.

484. The average cost of each successful vaccination was Re. 0-3-0 as compared with Re. 0-3-1 in the previous year.

485. The total number of operations performed by all establishments was 804,229, showing a decrease of 104,409. Of this number 621,650 were primary and 182,579 re-vaccinations, as compared with 705,338 and 203,300, respectively, in the previous year. The decrease of 83,688 in primary vaccination is held to be due to fewer infants being available for vaccination in consequence of the high infantile mortality that occurred during the widespread epidemic of malaria in the autumn of 1917. The decrease of 20,721 in re-vaccinations is said to have been due to re-vaccination being performed in those parts of the Province which were relatively less populous than in those in which re-vaccination was carried on last year, also to the very marked lessened prevalence of small-pox and the greater prevalence of malaria.

486. The percentage of males and females to total number of re-vaccinations was 65·95 in the case of males and 34·05 in that of females as against 66·98 and 33·02 in the preceding year. The percentage of success in primary vaccination was 98·25 as against 95·22 in the previous year, while in the case of re-vaccination it was 77·16 as compared with 71·89. This satisfactory result may well be due to the training of the vaccination staff in the Punjab Vaccine Institute. The percentage of vaccinations in which results were not known to the total number in 1917-18 was 4·80 in the case of primary and 18·71 in that of re-vaccination as compared with 5·31 and 19·64, respectively, in the year preceding.

Punjab Vaccine Institute.

487. The total number of tubes issued by the Punjab Vaccine Institute was 49,087 as compared with 42,438 in the previous year. Of the 20,298 tubes sent out of the Punjab 13,236 tubes or 1,058,880 doses of vaccine were supplied for the overseas forces.

488. Out of the 49,087 tubes issued during 1917-18 results were received in the case of 23,649 tubes, showing that 722,459 primary and 168,672 re-vaccinations were performed with an insertion success of 97·33 per cent. in primary and 73·91 per cent. in re-vaccination as against 93·98 and 67·53, respectively, in the previous year.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this chapter will be found in the report and statistical tables noted below :—

PROVINCIAL REPORTS.

Education.—(1) Report on the Progress of Education for the year 1917-18.

(2) Report on the operations of the Department of Agriculture, Punjab, for the year ending 30th June 1918.

(3) Annual Report on the Punjab Veterinary College and the Civil Veterinary Department, Punjab, for the year 1917-18.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1917-18.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistics of British India, Volume V, Education.

Statistical Abstract for British India, Volume IV, Administrative, Judicial and Local Self-Government.

53. General System of Public Instruction.

[*Vide* pages 173-184 of the Administration Report for 1911-12.]

54.—Education.

General summary.

489. For the first time there is a decrease both in the number of schools and in the number of pupils attending them, the largest decrease being under the head of private institutions.

490. Though there was an increase of 174 in the number of public institutions for males, there was a decrease of 1,666 in the number of scholars attending them, chiefly in primary schools, which is attributed by Inspectors to sickness and the war. Owing to recruiting and other war activities Deputy Commissioners and members of District Boards were unable to devote as much attention as usual to the needs of rural education. But there has been no real set-back. The number of students in colleges and secondary schools shows an increase, and public expenditure on education rose from 109 to 115 lakhs.

491. The year opened with a general Education Conference at Lahore in April 1917, in which the teaching of English, the use of the vernacular medium, provident funds, grant-in-aid rules, the training of Oriental teachers, etc., were discussed. The most important of its recommendations, *viz.*, the use of the vernacular as a medium of instruction in the Middle Department for all subjects save English, was adopted at once.

492. Under the orders of the Local Government, an educational survey of each district was made. This forms the basis of the scheme for the expansion and improvement of vernacular education introduced during the current year. A District Board Educational Finance Committee appointed by Government met in October and recommended among other things—(1) that the improvement and expansion of education in rural areas should proceed in accordance with definite five-year programmes administratively sanctioned by District Boards, (2) that Government should bear a fixed proportion of the cost of each programme, according to the resources of each District Board, (3) the provincialisation of Board Anglo-Vernacular Schools, English being introduced as an optional subject in vernacular middle schools, and (4) the assimilation of the status of District Inspectors to that of Assistant Inspectors.

493. A Bill for the introduction of compulsory primary education was published for opinion in October 1917, but was introduced into council during the current year.

494. The draft Bill contains a section permitting local bodies to remit fees for any of the boys required to attend school under the Act, provided that reasonable compensation is paid to institutions under private management for any loss in fee income entailed on them by such remission.

495. The standing committee on technical and industrial education submitted to Government proposals for the reform of industrial schools. These proposals were circulated to local bodies for opinion.

496. A scheme for a University diploma in commerce was submitted by the Education Department to the University.

497. The Imperial Government made a recurring grant of Rs. 1,75,000, which it was decided to utilise in—

(*i*) strengthening the staff of the Central Training College in order to admit more students, and to provide for the training of Oriental teachers;

(*ii*) the opening of four normal schools for women at centres outside Lahore;

(*iii*) the opening of an additional normal school for men in the Lahore Division;

(*iv*) the revision of the subordinate Educational Service, especially with a view to improving the pay of Oriental teachers;

(*v*) special grants to aided schools for the encouragement of provident funds (a form of expenditure suggested by the Government of India).

498. Pending the introduction of these measures, it was decided to use the money immediately available for the construction of normal schools.

499. A central site for a hostel for the Government College, Lahore, was purchased for Rs. 1,17,793.

500. Apart from European schools, teachers or students of the primary and secondary schools furnished over 7,000 recruits to the army, while the schools and colleges invested 6 lakhs in the war loan and subscribed 1⅓ lakhs for objects connected with the war.

Controlling agencies.

501. The Hon'ble Mr. J. A. Richey took over charge of the post of Director of Public Instruction from Mr. J. C. Godley, C.S.I., on 1st April 1917. Lala Hari Das succeeded the late Khan Sahib Khalifa Imad-ud-din as Inspector of the Ambala Division and S. Maqbul Shah, Assistant Inspector, was promoted to the post of second Inspector, Jullundur. Mr. Sanderson, Inspector of European Schools, was permitted to join the Military Department, though he has been carrying on the office work of his civil appointment. The Department lost a valuable officer by the death of Lala Labhu Mall, Assistant Inspector.

502. The system of placing Assistant District Inspectors in charge of tahsils has been more widely extended and has proved very satisfactory.

District Boards.

503. The total expenditure by District Boards fell from Rs. 25,40,260 to Rs. 22,79,372. Of the latter sum, Rs. 12,71,781 was contributed by grants from Provincial revenues. Inspectors report satisfactorily on the management of education by District Boards, though there was little expansion during the past year.

Municipalities.

504. Municipalities cannot as yet be said to be fully awake to their responsibilities in the matter of education, though their expenditure from their own resources rose from Rs. 3,95,670 to Rs. 4,24,996.

Collegiate education.

505. The number of Arts Colleges rose from 10 to 11 by the opening of the Guru Nanak Khalsa College, Gujranwala. The number of students attending them increased from 4,221 to 4,597, the largest increase

being in the attendance at aided institutions. Expenditure increased by nearly Rs. 20,000 to Rs. 6,65,093. Fees showed a rise of Rs. 21,133, while subscriptions and donations fell off by some Rs. 9,000. The staff of the Government College at Lahore was strengthened by the appointment of a Professor of Zoology.

506. At the Forman Christian College at Lahore a new block for classes in Industrial Chemistry was completed at a cost of Rs. 40,000, half of which was met by a Provincial grant. At the Khalsa College, Amritsar, a new block of 50 cubicles was built at the cost of Rs. 24,000 subscribed by His Highness the late Maharaja of Faridkot, and the chemistry laboratory was extended at a cost of Rs. 22,000, of which Government provided Rs. 10,000. More than two-thirds of the students are Sikhs, the number of Sikh students having trebled in the last three years.

507. The Lal Chand memorial library of the Dayanand Anglo-Vedic College at Lahore was completed during the year.

508. Some Rs. 80,000 were collected during the year for the building fund of the Sanatan Dharm College at Lahore and Rs. 10,000 were spent in purchasing adjacent land.

Secondary Education (Boys).

509. The number of recognised secondary schools rose from 413 to 426 and the number of scholars from 110,348 to 110,839. The new institutions consist of 8 new high schools and 5 new Anglo-Vernacular middle schools. The total direct expenditure rose from Rs. 28,23,739 to Rs. 29,91,845, about half of which was met from fees. The percentage of trained teachers rose from 65 to 66.

510. The introduction of practical agriculture and optional English in Vernacular Middle Schools is under consideration. The results of the special drawing and drill classes at Murree and Lahore, respectively, were quite satisfactory, justifying their continuance annually in future.

Miscellaneous.

511. Medical inspection has been suspended owing to the Medical Inspectors having been recalled for military duty.

512. The revision of grant-in-aid rules was further discussed at a conference of Inspectors in January 1918.

513. Revised standard plans for hostels and double-sectioned High Schools were drawn up by the Consulting Architect to Government.

514. In view of the special conditions created by the war the building programme of the department has been, to a large extent, in abeyance.

Primary Education (Boys).

515. There was an increase of 164 in the number of primary schools, but a decrease of 2,479 in the number of pupils, the figures on March 31st being 5,077 schools and 243,149 scholars.

516. The activities of the Rupar Primary School Association which opened 10 schools deserve special mention. The success of this useful pioneer movement is largely due to the financial support of Rai Sahib Lala Banarsi Das of Ambala.

517. Expenditure increased from Rs. 15,67,402 to Rs. 16,77,222, a very large proportion of which was met from provincial grants to local bodies. The number of trained teachers increased from 5,150 to 5,380 out of a total number of 10,036. A number of steps have been taken in the Jullundur Division to improve the efficiency of the teaching, *e.g.*, the introduction of Drawing and Handwork and of the "Look and Say" method of teaching reading in some primary schools.

518. Instruction in primary schools is still in many cases poor owing to the excessive number of classes per teacher. Proposals have been made to remedy this evil.

519. There was a serious loss in accommodation owing to the destruction of *kacha* school houses by the exceptionally heavy rains, but three Inspectors report increased help from villagers in the matter of rent-free sites and buildings or contributions towards the erection of school houses.

INSTRUCTION.

Training of teachers.

520. There were 1,085 men and 323 women under training, an increase over last year's figures of 61 women, but a decrease of 89 men owing to the closure of some of the local training classes. Proposals were submitted to the Government of India for a complete revision of the staff of the Central Training College. This college and the normal schools showed very satisfactory results in the examinations. The number of students in the Normal School for Women rose to 121. The majority of the students of the Sanawar Training Class who had gone to the war returned and finished their courses. A grant of Rs. 50,000 for two years and of Rs. 25,000 in subsequent years was given by the Government of India for this institution. Arrangements were made in St. Denny's School, Murree, for the training of a limited number of Kindergarten teachers.

Professional, Technical and Industrial Education.

521. The number of lecturers in the Law College increased from 2 to 5 and the tutorial system was introduced. The number of students at the Medical College rose from 232 to 289. The standard of instruction in the Veterinary College is gradually rising, attracting men of higher qualifications. The number of students in the senior classes of the Ludhiana Medical School for Women rose from 48 to 62.

522. The Lyallpur Agricultural College worked for the first time as an affiliated college and the first year course was that leading to the University degree. The demand for admission rose to 180 in 1917, many of the candidates being first class matriculates. The Rasul School of Engineering showed excellent results. The surveying course is second to none in India, but the work in the draftsmen's course might be more practical.

523. There was a decline in the number of students attending the Mayo School of Arts at Lahore. This is due to the great demand for artisan labour caused by the war, which induced many students to leave before the completion of the course. The work of the institution maintained its usual high level.

524. The Reformatory School at Delhi did very good work, but its great powers for good are not fully realized by the Magistracy. The Clerical and Commercial Classes at Amritsar, which were transferred to the Government High School, have obtained a new lease of life. A Clerical and Commercial examination was conducted for the first time by the Education Department on the results of which certificates were awarded.

Female Education.

525. The number of schools for Indian girls rose from 990 to 1,015 including one new high school, 3 new middle schools and 21 new primary schools. The number of pupils, however, rose from 51,496 to 51,987 only.

526. The third year class in connection with the Kinnaird College was opened with 5 students. There were 5 girls preparing for the B.A. degree at other arts colleges.

527. Secondary schools are, as a rule, well equipped, their chief lack being play-grounds and the staffs are generally well qualified; but the number of trained teachers in primary schools increases but slowly. Some mechanical proficiency is attained in the teaching of the three "Rs"; when intelligence is needed, the deficiencies of the untrained teachers become apparent. The small staff of Inspectresses could not cope with the work of constant supervision and instruction in method.

Education of Europeans.

528. The number of public schools remained the same, *viz.*, 34, and the number of pupils increased by 61 to 3,011. The total expenditure from all sources rose from Rs. 9,32,170 to Rs. 9,75,345. Increased staff grants indicate an increase in the rates of salaries and in the number of trained teachers. Serious difficulty is being felt owing to the war in recruiting masters for boys' schools.

529. The provision of a good water-supply and other improvements were effected in the Sanawar Military Asylum. A babies' department was opened to admit babies whose mothers have died while their fathers are

on active service. The Lawrence School, Ghora Gali, did exceptionally well in examinations. It had 240 boys and 121 girls on roll. The Sanawar and Ghora Gali institutions continued to do useful work in other directions.

530. There was an increase of Muhammadans in Colleges and Anglo-Vernacular Secondary Schools, but not in proportion to the increase shown by other communities. Out of 154,936 non-Brahman Hindus in public institutions there were 1,950 Jains. Education of Special Classes.

531. The formation of a Mounted Cadet Corps, the training of junior boys on the lines of the Boy Scout movement and the enhancement of the fees were among the changes made in the Aitchison College.

532. Sixteen new schools were opened for low-caste children and three such institutions were closed.

533. The total number of books considered by the committee was 384 against 500 in the previous year. The decline in the quantity and quality of the books submitted for awards from the Patronage of Literature Fund has led to the decision that the prizes should be fewer and of higher value, that works of real worth only should be submitted, and that any balance in the fund should be utilised in the purchase and distribution to schools of good vernacular literature. At the suggestion of the Text-Book Committee, Government has taken up the question of the standardisation of technical terms in vernacular, for which 6 sub-committees have been appointed. The Text-Book Committee.

55.—Literature and the Press.

Literature.

534. The slight decrease in the number of publications is due to the enormous rise in the price of paper. While the number of original works and translations has fallen, that of republications has slightly risen. Poetry and religion are, as usual, responsible for the largest number of publications. Some biographical works in Urdu clearly indicate the fact that broad-minded people of all denominations have begun to appreciate what is worthy of admiration in the great men and women of other communities or nations. The Urdu version of Colonel Pease's "Contagious Diseases of Animals" is a unique work of its kind. The war formed the subject of about 30 poetical works and the pressing questions of moral and social reform (temperance, widow-marriage, etc.), that of 40. There was no book worth the name on "Voyages and Travels."

535. The literary output of the year is on the whole poorer in quality as well as quantity than that of the last year, especially in drama, fiction and history.

Press.

536. The total number of newspapers and periodicals of all kinds published in the Punjab during the whole or part of the year under report was 268. The figure for the preceding 12 months was 261. There were 216 papers and periodicals in existence at the end of the latter year as against 211 in existence at the close of 1916. Fifty-seven periodical publications were started during the year and 52 ceased to exist during the same period. Newspapers.

537. Of the 268 newspapers and periodicals, 171 were in Urdu, 61 in English, 22 in Gurmukhi, 10 in Hindi and 4 bi-lingual. The number of daily papers was 18, weekly 71 and monthly 149. The remaining papers appeared at irregular intervals. Of the 18 daily papers, 5 were in English, one in Hindi and the remaining 12 in Urdu, of which 4 represented the Hindu and 7 the Muhammadan community, the twelfth being a war publication.

538. One hundred and fifty-six newspapers and periodicals were published in Lahore and 43 in Amritsar. The other centres of activity were

Simla (14), Gurdaspur District (10), Sialkot (7), Rawalpindi (6), Gujrat, Ferozepore and Gujranwala (5 each) and Jullundur (4).

Circulation.

539. The total circulation per issue of all papers was, as far as could be ascertained, about 246,000, as compared with about 270,000 and 284,000 in 1916 and 1915, respectively. The following were the more important papers in the province :—

English.

1. *Civil and Military Gazette* (Anglo-Indian, daily).
2. *Tribune* (Hindu, daily).
3. *Panjabee* (Hindu, daily).
4. *Bulletin** (Hindu, daily).
5. *Khalsa Advocate* (Sikh, weekly).
6. *Observer** (Muhammadan, bi-weekly).

VERNACULAR.

(a) Urdu.

7. *Hindustan* (Hindu, weekly).
8. *Himala* (Hindu, weekly).
9. *Paisa Akhbar* (Muhammadan, weekly).
10. *Loyal Gazette* (Sikh, weekly).
11. *Parkash* (Arya, weekly).
12. *Arya Gazette* (Arya, weekly).
13. *Vakil* (Muhammadan, bi-weekly).
14. *Al-Munir* (Muhammadan, weekly).
15. *Sitara-i-Subah** (Muhammadan, daily)
16. *Rajput Gazette* (Hindu, weekly).
17. *Akhbar-i-'Am* (Hindu, weekly).
18. *Urdu Bulletin* (Hindu, daily).
19. *Khalsa Akhbar* (Sikh, weekly).
20. *Sanatan Dharm Parcharak* (Hindu, weekly).
21. *Ahl-i-Hadis* (Muhammadan, weekly).
22. *Desh* (Hindu, daily).
23. *Paisa Akhbar* (Muhammadan, daily).
24. *Public* (Hindu, daily).
25. *As-Sabah** (Muhammadan, daily).
26. *Al-Fazal* (Ahmadia, bi-weekly).
27. *Kashmiri Magazine* (Muhammadan, weekly).
28. *Watan* (Muhammadan, weekly).
29. *Al-Asar** (Muhammadan, daily).

(b) Gurmukhi.

30. *Khalsa Samachar* (Sikh, weekly).
31. *Panth Sewak* (Sikh, weekly).
32. *Punjab Darpan* (Sikh, weekly).

540. Of these the circulation of Nos. 7 and 8 was claimed to be above 4,000; of Nos. 1, 2, 9 and 10 above 3,000; of Nos. 11, 12 and 30 above 2,500; of Nos. 13 and 14 between 1,500 and 2,000; of Nos. 15—24 and 32 above 1,000; and of the rest between 500 and 1,000.

* Have since stopped publication.

541. The decrease in the circulation of newspapers may be attributed to the increased cost of paper and printing requirements owing to the war, though it is probable that at no time was the newspaper-reading public so large, popular interest being stimulated by political events.

542. The total number of declarations under sections 4 and 5 of Act XXV of 1867 filed during the year was 288; 61 presses being declared or re-declared under section 4, and 227 newspapers under section 5. Executive action.

543. Security was demanded on 26 occasions by District Magistrates on original declaration or on re-declaration or by varying a previous order. In three of these cases, the demand was made on re-declaration owing to the objectionable tone of the papers concerned. No demand was made by the Local Government in the year under report.

544. Action under the Defence of India (Consolidation) Rules, 1915, was confined to the imposition of pre-censorship on the *Sitara-i-Subah* (daily and weekly). An order was also issued to all newspapers in the province prohibiting the publication of any account of the proceedings of the meeting held at Lahore on the 28th June 1917 to protest against the Madras internments, but it was subsequently cancelled.

545. Formal warnings were administered through District Magistrates to newspapers and periodicals as follows :—

(*a*) Seven for publishing articles open to exception on political grounds.

(*b*) Five for writings calculated to arouse sectarian ill-feeling or religious animosity.

(*c*) Two for alarmist articles.

(*d*) Two for unjustifiable attacks on a Government servant and a ruling chief.

(*e*) Two warnings were administered to the same paper for its generally objectionable tone.

546. No action was taken under section 12 of the Indian Press Act.

547. The following action was taken under section 3 of Act XXV of 1867 :—

Warnings	...	...	8
Prosecutions	...	...	3

548. In one case, a printing press was warned for printing a pamphlet of an indecent character and two prosecutions were instituted for offences of a similar kind.

549. In four cases, the publishers were required to surrender for destruction all unsold copies of certain objectionable publications, while in two others some obscene and offensive passages were ordered to be deleted.

56.—Literary Societies.

[*Vide* pages 196 and 197 of the Administration Report for the year 1911-12.]

57.—Arts and Sciences.

Lahore Museum.

550. During the year 1917-18 the total number of visitors was 361,563 and the average daily attendance was 1,021 as against 357,481 and 1,013, respectively, in the previous year. There was considerable increase from 5,680 to 8,540 in the number of female visitors on the Zenana Day which is interesting as showing the growing tendency of women and girl students to study in the Museum. Visitors.

INSTRUCTION.

Educational work of the Museum.

551. The usual course of lectures was delivered during the cold weather. The average attendance was 235 as against 153 in the previous year, showing the highest average on record.

Acquisitions.

552. The Museum acquired by gift, purchase and on loan important additions to its collections. The year now passed has had on the whole some features of special interest to the Museum world. The Museum was fortunate in acquiring the seven Greek Didrachms. All these coins are extremely rare. The Ornithology section has been strengthened by the gift of the remains of Colonel Tytler's well-known collection of birds' skins from all parts of the world. Another acquisition deserving of special interest is a Persian Manuscript "Punch Ganj" by the poet Nizami. Its caligraphy is very fine and the illustrations are good examples of the later period of Persian Art.

Loan collections.

553. Major-General R. H. Ewart, C.B., C.I.E., D.S.O., has lent his entire collection of German East African native arms, curiosities, etc., of which the most interesting thing is a large embroidered banner with German Imperial Coat of Arms, designed in black velvet and tinsel on a yellow ground. It was found by the British Troops at Dar-es-Slaam on occupation.

Finance.

554. The expenditure amounted to Rs. 9,897-4-7, as compared with Rs. 9,584-4-5 in the previous year.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1918, and in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1917-18.

58.—Archæology.

Hindu and Buddhist Monuments.

555. During the year under report, the sum of Rs. 8,423 was expended on the conservation of Hindu and Buddhist Monuments in the Province, of which Rs. 3,420 was devoted to annual repairs and the rest to works of special nature, which were as follows:—

Preliminary operations were carried out at the Malot Temple (Jhelum District). The ugly platform which had been built round the temple some years ago was dismantled, and it is gratifying to note that parts of the old basement of the temple have been found intact, so that it will be possible to rebuild it on the original plan. A scaffolding has been put up for the proper examination of the roof, and an estimate for further repairs will be prepared after inspection. At the Baijnath Temple (Kangra District) lime plaster was scraped off the stone carvings, and other minor repairs were carried out. The conservation work carried out at the Kangra Fort consisted of repairs to the arch of the main gateway and the wall adjoining it, and the construction of a dry stone paved path from the main gateway of the Fort to the temple inside it, and of a stone pavement in front of the main gateway. The repairs effected at the rock-cut temples at Masrur (Kangra District) embraced the underpinning of masonry, grouting of cracks in the structures, fitting the Hanuman image on the floor, construction of a new *tulasi*-stand, clearance of vegetation, excavation around the plinth of the temple, and stacking of images. Important conservation works were carried out at Taxila (Rawalpindi District) under the direct supervision of the Director-General of Archæology in India, and full particulars of these will be found in his annual report.

556. Other monuments were inspected during the year. They are the ancient site of Bhera, the Sabz Pind near Miani (Shahpur District) and the remains of Amb (Shahpur District) and Katas ((Jhelum District) in the Salt Range. Inspection and conservation notes on the monuments at the two last-mentioned places are under preparation. The existence is reported of three temples at Amb, though only two such structures have survived on the site. The conservation of these temples has continued for several years past, the cost of repairs being met year to year from the grant for annual repairs. A great deal more, however, remains to be done, and when funds are available, arrangements for repairs on more satisfactory lines will be made. The principal monuments at Katas are the well-known group of Satghara temples. Most of them are almost in ruins, but two seem to be in a good state of preservation, and when the modern plaster work is removed, it may be possible to restore them to their original form and style.

Muhammadan and British Monuments.

557. During the year a sum of Rs. 28,600 was expended in the province on the upkeep of Muhammadan and British Monuments; Rs. 11,000 of this sum was spent on non-recurring special repairs and the residue on maintenance.

558. In Lahore District extensive works were carried out in the Shalimar gardens where, besides other repairs, the enclosure wall had to be

ARCHÆOLOGY.

underpinned substantially for nearly its whole length. The surroundings of the Akbari Sarai at Shahdara were improved by planting grass and removing an untidy cinder path.

559. A storm water drain is being constructed in front of Lahore Fort and, inside the Fort, the roof of the small Sikh pavilion over the Shish Mahal was strengthened by steel beams, which will be invisible.

560. In Gujranwala District a sum of Rs. 2,400 was spent on the Haran Munara and tank at Shaikhupura in re-building the southern portion of the tank, repairing the parapet and improving the drainage of the surrounding area.

561. A small sum was also spent in connection with the setting up of a memorial tablet and masonry pillar to commemorate the grave of Subedar Major Mir Sher Ali, Sardar Bahadur, of the 8th Light Cavalry, Bengal Native Army, who—then an old man of 78—fell in the battle of Ramanagar on the 22nd November 1848, fighting against the Sikhs.

562. In Rohtak and Jullundur Districts repairs were made to the *Kos Minars* (Mughal milestones) erected along certain of the main routes across India in the reign of Jahangir.

563. In Gurdaspur small repairs were carried out on the Takht-i-Akbari at Kalanaur—a monument which is of interest as the site of Akbar's Coronation prior to his return to the Capital in 1556 on receiving the news of the death of his father Humayun.

CHAPTER IX.

MISCELLANEOUS.

59.—Ecclesiastical Jurisdiction.

(For this section reference should be made to pages 201-207 of the Report for 1911-12.)

60.—Ecclesiastical.

564. Rupees 400 were contributed by Government towards the construction of the Lyallpur Church tower and a grant of Rs. 1,020 was sanctioned for re-building the wall and improving the grounds of the cemetery at Sirsa. Improvements were made in the pay of the establishments attached to the churches at Jhelum and Khewra and the cemeteries at Karnal, Solon, Subathu and Dagshai. The small church at Kalka, which had been built mainly with voluntary subscriptions, was taken over by Government to be maintained from Imperial Funds.

565. Sanction was accorded by the Government of India to the Bishop of Lahore and his domestic Chaplain attending the Episcopal Synod at Calcutta in February 1918. Two chaplains were placed at the disposal of the Government of India for service in Mesopotamia.

566. A conveyance allowance of Rs. 50 per mensem was sanctioned by the Government of India for the Church of Scotland Chaplain at Rawalpindi. The Ven'ble Archdeacon J. G. S. Syme was granted long leave to England and Canon H. T. Wheeler, Chaplain of Simla, was appointed to officiate as Archdeacon.

61.—Stationery.

567. The total value of stationery supplied during the year under report was Rs. 3,32,592 against an allotment of Rs. 3,35,890, showing a net saving of Rs. 3,298. The expenditure was distributed as follows :—

	Rs.
Offices other than Presses	87,159
Presses	2,45,433
Total ...	3,32,592

568. As compared with the preceding year there was an increase of Rs. 81,039 or a little over 24 per cent., due chiefly to the rise in the prices of all articles of stationery, particularly paper.

62.—Punjab Government Press.

569. Receipts from the sale of Gazettes and other Government publications were slightly greater than in 1916-17, but in other Press receipts there was a decrease of about Rs. 1,200. General expenditure, exclusive of the cost of printing paper and binding materials, was reduced by over Rs. 12,000. The total expenditure on contract printing was also about Rs. 7,000 less than in the previous year. These reductions are chiefly due to the standardization and stereotyping of certain departmental forms, reduction in size of paper wherever possible, and the adoption of cheaper methods of printing.

570. Rigid economy in paper and binding materials was practised during the year under report. The use of bleached and coloured papers was considerably curtailed and unbleached paper substituted wherever possible. Owing, however, to a rise of almost one hundred per cent. in the cost of paper and binding materials the expenditure under this head increased by over Rs. 40,000.

571. A new departure during the year was the use of jail-made paper for the manufacture of official envelopes and for other purposes in which mill-made paper was not absolutely essential. This paper was entirely manufactured by unskilled prison labour. Efforts are now being made by the Jail authorities to improve the quality and, if successful, future comsumption is likely to be increased.

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No. 8566.

FROM

THE HON'BLE MR. J. P. THOMPSON, I.C.S.,

Chief Secretary to Government,

Punjab and its Dependencies,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

FOREIGN AND POLITICAL DEPARTMENT.

Dated Lahore, 28th March 1919.

SIR,

IN continuation of this Government's letter No. 4160-Genl. of 13th February 1919, and in reply to your telegram No. 491-G. of 17th February and Dr. Rushbrook Williams' demi-official letter No. 1044-C. of 10th February 1919, I am directed to submit a paragraph revised up to the end of 1918 on the War and also a supplementary paragraph on the outbreak of influenza for incorporation in the General Summary for the Indian Administration Report at the end of the paragraph on "Condition of the People."

I have the honour to be,

SIR,

Your most obedient servant,

J. P. THOMPSON,

Chief Secretary to Government, Punjab.

PUNJAB.

Lieutenant-Governor,

SIR M. F. O'DWYER, G.C.I.E., K.C.S.I.

The War.—In a Province which has alwasy been noted for its martial traditions the war naturally continued throughout the year* to form the most serious pre-occupation of the administration. In July 1917, in response to the call for a more effective organization of the man-power and resources of India, a Provincial Recruiting Board was formed, consisting of a number of experienced Civil and Military Officers and non-officials all of whom had practical experience of the problems with which they were called upon to deal. The Lieutenant-Governor, who had been appointed a member of the Central Recruiting Board, himself assumed the presidentship of the Provincial Board which met regularly until the cessation of hostilities, and rendered the greatest assistance to Government in all matters connected with recruiting. A vigorous campaign was initiated in all districts with a view to attracting to the Army classes of military value, and a series of Recruiting Darbars was held by the Lieutenant-Governor at which the apathetic were aroused to their duty and the active were stimulated to further effort by commendation and the judicious distribution of rewards in the form of land, khillats, titles and other distinctions. That the policy thus pursued has been amply justified by results may be gathered from the figures quoted by the Lieutenant-Governor in his speech to the Provincial Legislative Council in April 1918 when he recalled to

* "The year" throughout this chapter means the latest annual period for which departmental reports are available (*e.g.*, calendar year 1917 or financial year ending 31st March 1918, etc.) It is in every case the annual period subsequent to that on which the report of the year 1916-17 was based. This is necessary for the purpose of comparison. Where information up to the end of the calendar year 1918 is given, this is distinctly stated so as not to vitiate comparisons.

the members the resolution which the Council had passed soon after the outbreak of war humbly assuring the King-Emperor of the determination of the people of the Province to serve His Majesty in every form in which their help might be required against the enemies of the Empire. Whereas during the first 2½ years of the war the Punjab furnished 124,000 men to the Indian Army, during the year 1917-18 it raised over 127,000 to fight the battles of the Empire. All the rest of India, including the Native States, with more than 12 times the Province's population, raised in the same period 137,000. In addition to these combatants some 60,000 or 70,000 Punjabis were enlisted as non-combatants, followers, &c.

The Punjab was well represented at the conference which was summoned to Delhi by His Excellency the Viceroy at the end of April 1918, in response to the solemn and urgent message of the Premier of Great Britain, to concert further measures of help to the Empire in the final effort of the war which has since terminated so gloriously. Subsequently the Lieutenant-Governor called a Provincial Conference at Lahore on the 4th May 1918. At that meeting the resolutions passed assured His Majesty the King-Emperor of a loyal, prompt and practical response to the august message received from him; pledged the Province to contribute within 12 months 200,000 additional men to the army, of whom 180,000 would be combatants; proposed to raise 2,000 young men of the educated classes for the Indian section of the Indian Defence Force, and expressed a determination to raise a war loan eclipsing the previous one and develop to the utmost the local resources of the Province.

To carry on propaganda work the Punjab Publicity Committee was formed at Lahore, with a local branch in each district. All the well known methods of publicity were placed under contribution and the central committee issued a most successful weekly paper *Haq* (The Right) in English, Urdu and Gurmukhi (the two chief vernaculars of the Province) which attained a very large circulation.

The success of the intensified recruiting campaign is proved by the fact that by the close of the war the numbers of men estimated to have joined the army during the war as combatants and non-combatants were 375,000, of whom four-fifths belonged to the former category. How well the soldiers of the Province have borne themselves in action has been proved by the fact that they won up to the end of hostilities on the Western fronts no less than 1,905 distinctions for gallantry in the field, including 4 Victoria Crosses and 24 Military Crosses, besides 141 Foreign Orders and Medals. In these honours the troops of the Ruling Princes and Chiefs of Patiala, Jind, Bahawalpur, Kapurthala, Faridkot, Maler Kotla and Chamba, who came forward with practical and generous offers, usually to double their existing contributions of fighting men, had their full share; and it was with peculiar pride and pleasure that the people of the Province learned of the selection of His Highness the Maharaja of Patiala to represent the Princes of India in the Imperial War Conference. The honour was welcomed as a just recognition of the part played by the premier Punjab State and the Punjab generally in the great conflict.

It cannot be disguised that the burden of sacrifice has been unevenly distributed among the people. The 2½ lakhs of combatants have been drawn almost exclusively, and 60,000 non-combatants mainly, from the rural agricultural classes. The urban population of the Province which forms one-tenth of its whole population has not borne a share proportionate to its obligations and even the attempt to recruit from its classes a battalion 1,000 strong for purely local service in the Indian Defence Force failed, only 150 fit men in all being enrolled.

As regards the organisation of resources, the Province subscribed nearly six crores (£4 millions) to the first and over 3¾ crores (£2½ millions) to the main section of the Second Indian War Loan—totals exceeded only by the wealthy presidencies of Bengal and Bombay.

It is not yet known what the provincial contribution to the Post Office Section of the Second War Loan amounted to.

The success attained was due largely to the effective system of propa-

ganda devised by the Provincial War Loan Committee and carried through by District Officials and Committees. Apart from the supply of animals and materials for the auxiliary services of the Army, the Province also contributed liberally to the various War and Relief Funds, the amount raised on the 12th December 1917 for "Our Day" alone having reached about 17 lakhs (£113,000).

On the 27th November 1918 Victory Celebrations were held at Lahore to commemorate the triumph of the Allied Forces. The Lieutenant-Governor, accompanied by the Army Commander of the Northern Command, the General Officer Commanding the 16th (Indian) Division, the heads of all the civil departments and the local leaders of the various communities passed in State Procession (on elephants) through the city to the Minto Park, where vast crowds were assembled. His Honour read out the Gracious Message of His Majesty the King-Emperor to the Viceroy, Princes and Peoples of India to the audience, and drew attention to the great and worthy part which the Province had played in the world war, which had now resulted in a crowning triumph due, under Providence, to the inspiration of a just cause, the united efforts and sacrifices of the King-Emperor's subject of all races and classes and above all to the heroism and endurance of the Army.

Throughout the celebrations, the military element was kept prominent.

The further depletion of the cadres of various departments in order to meet the military demand for officers intensified the strain on the administration, but fortunately there was no recrudescence of internal political trouble. A diminished stream of emigrants returning from America and the Far East reached the Province; but thanks to the arrangements for the surveillance and control of suspicious or dangerous characters, no trouble was experienced in dealing with these men. Indeed, it was found possible to relax restrictions placed on numbers who had learned their lesson and 73 men who had been interned in jail under the Ingress into India Ordinance were released, while 637 more were freed from minor restrictions. The number left in jail at the close of the year was 29 only of the more desperate and stubborn seditionaries, while about 710 others are prohibited under the Ingress Ordinance and the Defence of India Act from leaving the villages in which they reside.

During the remaining nine months of the calendar year 1918, it was found possible to show further clemency, and on the 31st December there were only 16 internees and about 600 under minor restrictions.

Supplementary note for incorporation at the end of the paragraph on "Condition of the People."

Since the close of the period referred to in the above remarks, in regard to which annual reports are available, the Province in addition to a failure of the 1918 monsoon, which caused extensive failure of the autumn crop and severe scarcity of fodder, has suffered from a terrible visitation of virulent influenza.

Outbreaks of influenza occurred throughout the Punjab in August; but the nature of the disease was so mild and apparently trivial, with no increase of mortality, that it attracted little or no attention among either the medical profession or the laity. Those attacked recovered rapidly without complications or sequelæ. It was, no doubt, introduced by immigrants, both civil and military, from Bombay and Karachi, and subsided by the end of the month. A second wave of the epidemic appeared first in the South-Western Districts of the Province in the first half of September, Multan and Dera Ghazi Khan reporting localised outbreaks of severe type with a high mortality. By the first week in October the epidemic was general throughout the Province; and reached its maximum intensity in the fourth week, the peak of the epidemic being in most places about the 28th October, from which date it began to decline with almost dramatic rapidity. By the 10th November in nearly every district fresh cases ceased to occur, but an aftermath in the form of mortality among old cases continued until the end of November, when the disease was finally extinct. The Kangra District offers a notable exception to

the general course of the epidemic in that in certain areas the intensity appears to have been delayed. For instance, the dispensary at Banjar showed the greatest number of admissions on the 7th December : and reports from Kulu mention that the maximum intensity was delayed until the 14th November. In most places the virulence rapidly declined during the first week in December. By the 25th of the month the disease had disappeared from the greater part of the valley, while by the end of November it had ceased in the tahsils of Nurpur and Palampur. Dharamsala was not free until the 1st January 1919, and the disease lingered later in Kulu.

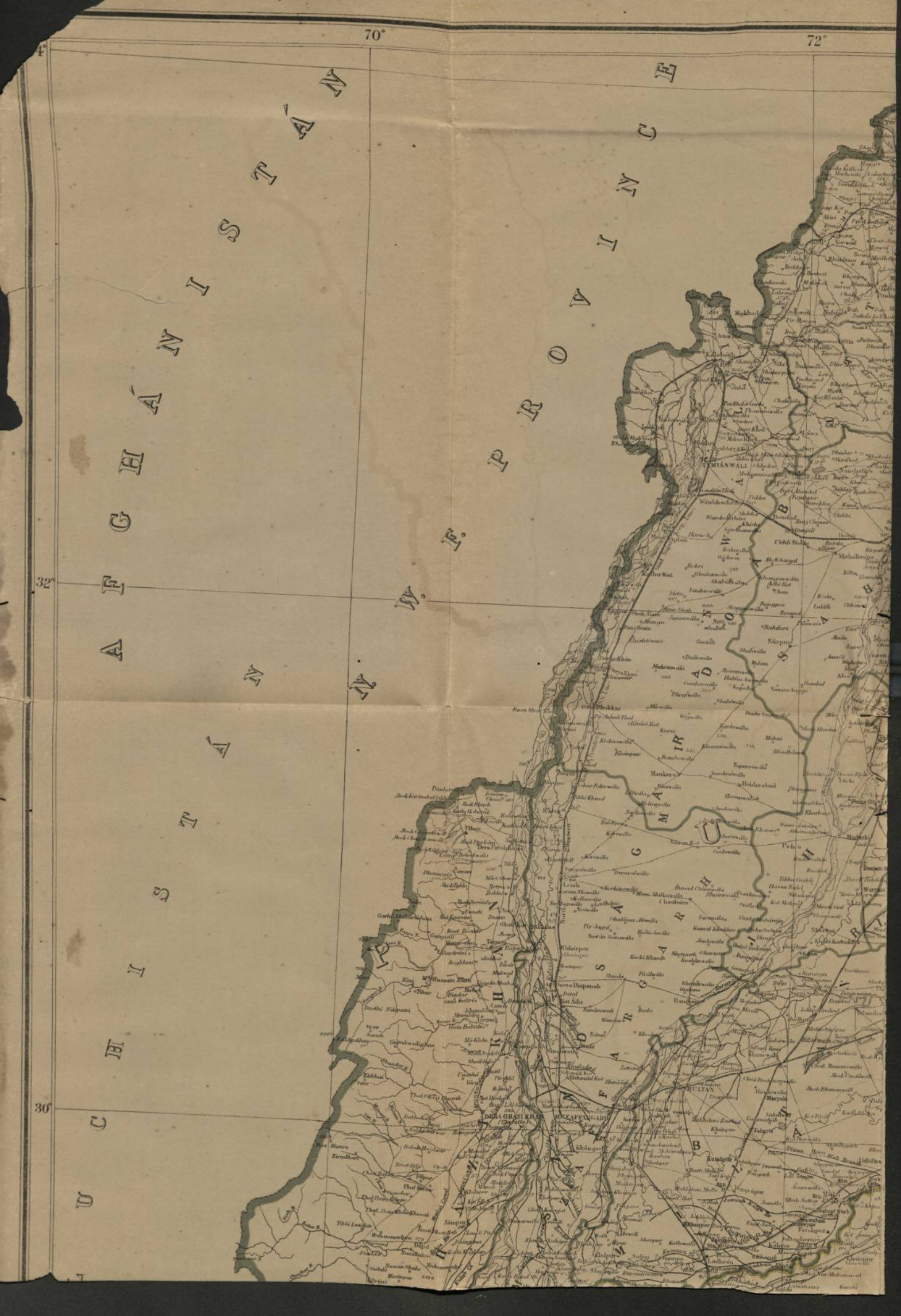
The incidence of the disease would, however, appear to have been less in some localities off the line of Railway, and in villages off the beaten track ; and in urban compared with rural areas due, it may be assumed, in the former case to lack of facilities for communication with the outside world, and in the latter to the better sanitary conditions existing in towns where the general population is better clothed, fed and housed than in villages.

No grade of society proved immune to the disease which observed neither racial nor sex distinction. Europeans and Indians, Muhammadans and Hindus, were attacked alike. Naturally, compared with the well-to-do, the poor suffered more intensely, and among them the case mortality was higher, due to their less favourable environments and to the fact that they were less well nourished, clothed and tended to. For the same reasons case mortality was greater in rural areas than in towns. The age incidence shows that mortality was greatest among persons between 20 and 40 and that women suffered more than men. The latter fact may be accounted for by the indoor existence spent by most women in India.

It is estimated that the epidemic caused over 800,000 deaths in the months of October and November.

2984 CS—400—14-4-19—SGPP Lahore.

PUNJAB ADMINISTRATION REPORT, 1917-18.



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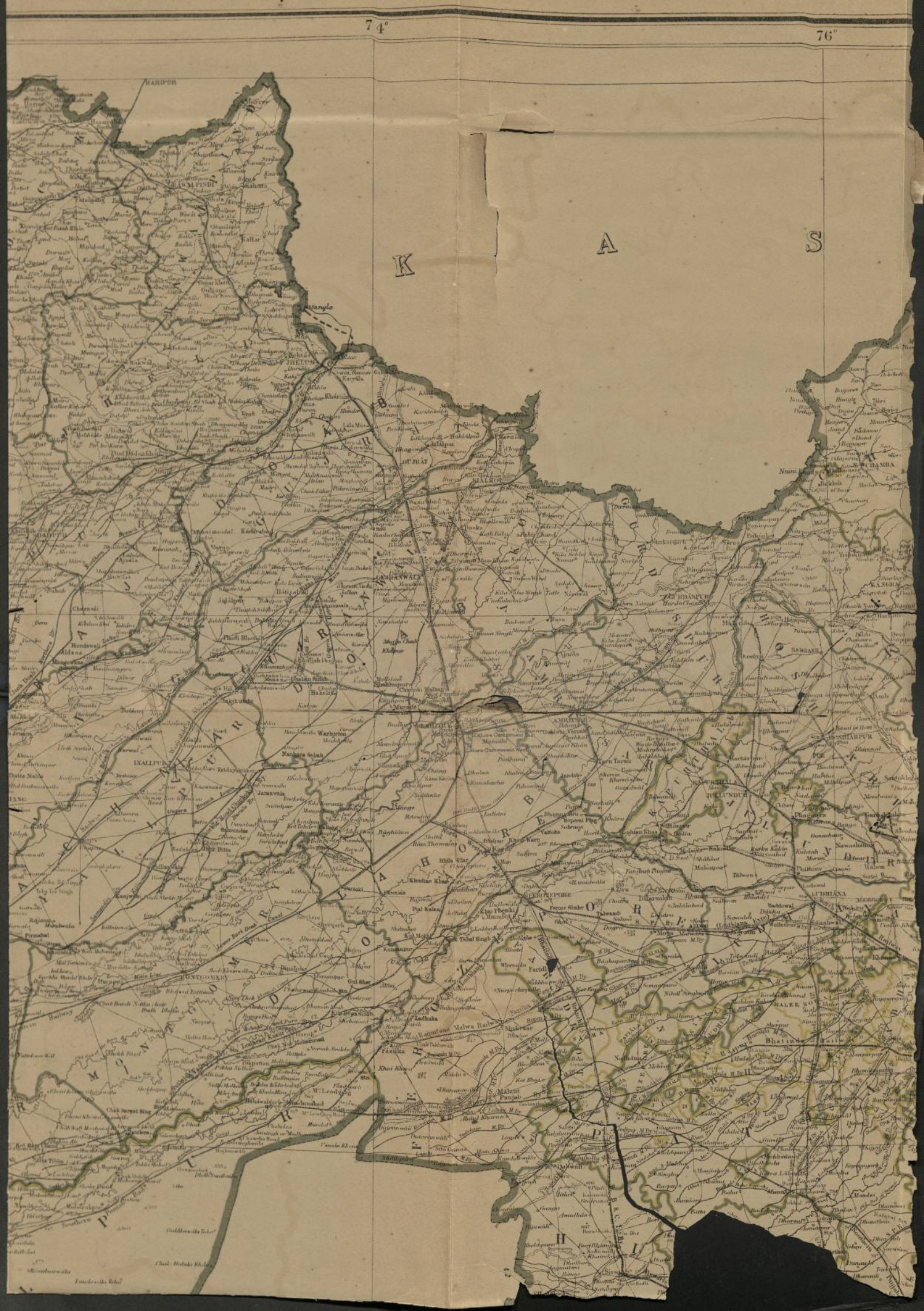
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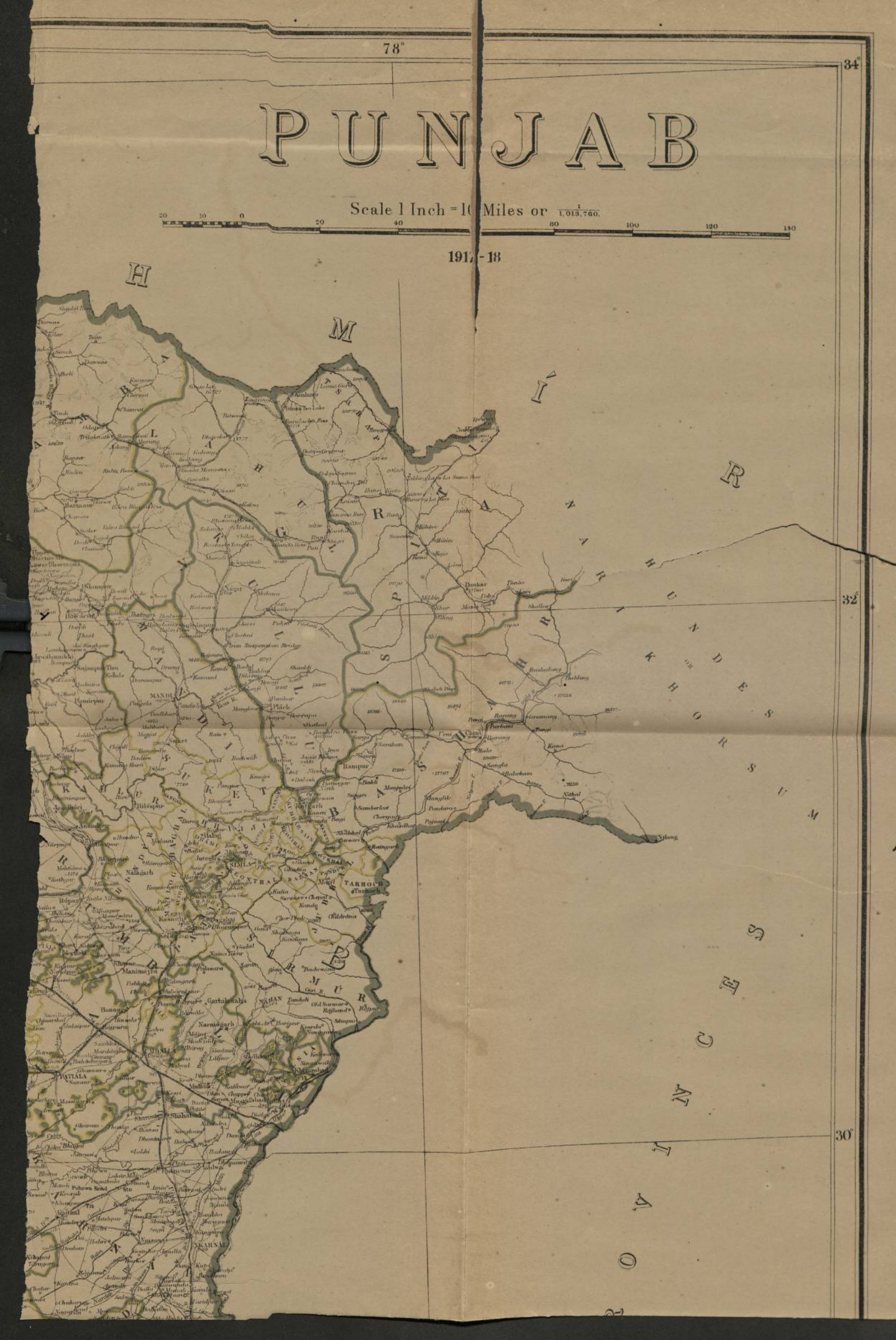
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6. Umballa
7. Kapurthala State
8. Patiala State
9. Sabha
10. Jind
11. Farishan
12. Kalsia
13. Bhadaur
14. Dujana
Note: The Longitudes are reckoned in the Greenwich Meridian, taking that at Madras Observatory as 80°17'-21" East. This requires a correction of 0°-7'-27" to make them correct with the most recent value of the Geodetic Longitude of that Observatory, viz. 80°14'44"
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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1917-18.

Lahore :
PRINTED BY THE SUPERINTENDENT GOVERNMENT PRINTING, PUNJAB.
1919.

PART II.

DEPARTMENTAL CHAPTERS.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Surveys and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 58—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

Personal. 1. Sir Michael O'Dwyer, G.C.I.E., K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year.

General. 2. The decided success of the arrangements for the systematic inspection of judicial courts justified the re-appointment of a third temporary Additional Judge for four months in the cold weather of 1916-17. The Government of India sanctioned in November 1916 the retention of the appointment of Additional Secretary to Government up to the 14th September 1917 or till the termination of the war whichever were earlier.

Two new sub-divisions. 3. In the year under report the Alipur Tahsil of the Muzaffargarh District was constituted a sub-division of that district. Also certain villages and areas of the Multán District were formed into a sub-division of that district to be known as the Khanewál Sub-Division, with head-quarters at Khanewál.

8.—Relations with Tributary States and Frontier Affairs.

I.—PHULKIAN STATES.

4. Lieutenant-Colonel B. E. M. Gurdon, C.I.E., D.S.O., gave over charge of the Agency to Mr. L. M. Crump, I.C.S., on the 30th August 1916. The post of Personal Assistant to the Political Agent remained vacant.

PHYSICAL AND POLITICAL GEOGRAPHY.

PATIALA.

Area, 5,412 square miles; population, 1,467,659; approximate revenue, Rs. 1 crore; army and police, 5,557; Maharaja Sir Bhupendra Singh, G.C.I.E., Sidhu Jat; age 26; has a male heir; salute, 17 guns.

Personal.

5. The health of His Highness the Maharaja remained good throughout the year. He attended the Chiefs' Conference at Delhi.

Administration.

6. Diwan Bahadur Daya Kishen Kaul, C.I.E., was appointed Foreign and Financial Secretary on the 17th July 1916, and Khan Bahadur Khalifa Sayyid Hamid Husain and Sardar Bhagwan Singh retired. During the year the State suffered a loss by the death, on the 27th February 1917, of Sardar Chaman Lal, Barrister-at-Law, Judicial Secretary. M. Nihal Singh, Extra Assistant Commissioner, Punjab, has been appointed as his successor.

The war.

7. During the year under report the Darbar continued to render active assistance in the prosecution of the war. Reinforcements to the Imperial Service Troops at the front were despatched as required; and the maintenance of the Imperial Service Troops on active service at the front cost the State an additional expenditure of more than Rs. 8¼ lakhs over and above the peace budget.

8. Substantial offers and contributions in connection with the war were made by the Maharaja and were accepted by Government. These included—

(1) A donation of Rs. 21,000 to the War Fund of the St. John Ambulance Association.

(2) Accommodation for War Hospitals or for convalescent sections of Indian Troops in certain buildings in the State territory.

(3) Two corps of mule-drivers and one camel corps at an approximate total cost of Rs. 4,15,113. Two corps of mule-drivers have already been despatched to Lucknow and Cawnpore respectively. Energetic recruiting parties, sent out to various States to make purchases, are engaged in bringing the camel corps to full strength.

(4) Valuable contributions and offers of *personnel*, horses and mules.

9. The Patiála Darbar have readily agreed to co-operate with the Government of India in the new system of recruiting for the Indian Army; and Patiála already supplies more men to the Indian Army than any State in the Indian Empire. The programme of enlisting recruits under the new system will be carried out by the State Agency. State Recruiting Officers are now permitted by Government to visit British territory for the purpose of enlisting recruits for the Imperial Service Troops. Sardar Gurbakhsh Singh, Commandant of the State Infantry, Imperial Service Troops, was granted the Second Class Order of British India, with the title of "Bahadur", for distinguished conduct in the field. A meeting under the presidency of His Highness the Maharaja at which leading Sikh gentlemen from all parts of the Punjab assembled, was held at Patiála on the 4th August 1916 on the occasion of the second anniversary of the entry of Great Britain into the war. His Highness made a most impressive and eloquent speech.

Crops and Irrigation.

10. Insufficiency of rain resulted in the rabi crop being below average; but the kharif crop generally was normal. The import of fodder at cheap rates cost the State about Rs. 41,000. The land revenue, however, was collected without difficulty and practically no suspensions

were granted. As regards irrigation, owing to heavy war expenditure, little money was available for improvements; but progress was made with an important telephone scheme, insuring more efficient control and better distribution of water. It is satisfactory to note that the kharif area on the Sirhind Canal and the rabi area on the Western Jumna Canal were the highest on record.

Public Health.

11. The figures for plague and cholera show a remarkable decrease in comparison with those of the preceding year.

JIND.

Area, 1,259 square miles: population, 271,728; approximate revenue, Rs. 23 lakhs; army and police, 1,815; Maharaja, Sir Ranbir Singh, G.C.I.E., K.C.S.I., Sidhu Jat; aged 38; has no male heir; salute, 11 guns.

Personal.

12. His Highness the Maharaja enjoyed excellent health during the year, and, except for a few days' visit to Dehra Dun during March 1917, resided almost the whole year in the State itself. There was no change in the administration.

The war.

13. The Jind Darbar continued to co-operate in the war with characteristic thoroughness. In addition to the assistance rendered during the preceding year, the Maharaja gave much valuable help in the way of men, money and animals, his contributions reaching a grand total of approximately Rs. 18 lakhs from the outbreak of the war up to the 31st March 1917. Notable contributions and subscriptions during the year under report included such items as a cash contribution of Rs. 1 lakh (in gold and silver coins); an expenditure of nearly Rs. 2¼ lakhs on the Jind Imperial Service Regiment at the front; a subscription of Rs. 5½ lakhs to the War Loan; a present of 300 camels; and generous subscriptions to the War Hospital at Dehra Dun, the Lord Kitchener Memorial Fund, Lady O'Dwyer's Comforts for the Troops Fund and the Fund of the Young Men's Christian Association.

14. The State Imperial Service Infantry lost in action in East Africa during the year 12 killed and 43 wounded. The total casualties from the commencement of the war now amount to 172. During the year the regiment fought in several actions. The distinctions received by officers and men included 3 Indian Distinguished Service Medals (one of the recipients being Major Bihara Singh); 1 Indian Order of Merit, 2nd class (Subadar Bhagwan Singh); 1 Medal of St. George, 2nd class; 1 Medal of St. George, 3rd class; and 1 Cross of St. George, 4th class. Subadar Harnam Singh, who was awarded the Indian Order of Merit, 2nd class, for gallantry in East Africa, and was a prisoner of war with the Germans for 20 months, returned to Sangrur on the 19th November 1916. Major-General Natha Singh, Sardar Bahadur, Commander-in-Chief, Jind State Forces, and Commanding the Regiment at the front, and Colonel Baldeo Singh, Imperial Cadet, Commandant of the Unit but second-in-command in the field, reached Sangrur on the 12th March 1917 after being on service for 2½ years. The wise and generous care of its soldiers taken by the State is evidenced by recent grants of free rations, increases in the pay of troops, war pensions to officers and men invalided and family pensions to the heirs of those fallen on the battlefield or who have died on active service.

Crops and agriculture.

15. A rather late monsoon militated against the success of the kharif crop, but the rabi outturn was expected to be above normal, and prices of foodstuffs were on the whole fairly satisfactory. Last year's scarcity of fodder was repeated in the early part of the year under report, and the Darbar continued its arrangements for import at cheap rates until timely rains at the commencement of July 1916 obviated the necessity

PHYSICAL AND POLITICAL GEOGRAPHY.

for such assistance. Except for a negligible amount, the total revenue demand for the year was realised.

Public Works.

16. The Jind-Panipat Railway was opened for traffic on November 1st, 1916; the contribution by the Darbar during the year towards the construction of this line amounting to nearly Rs. 2 lakhs. An average of 7·2 per cent. on their total investments of Rs. 50¼ lakhs in railways was received by the Darbar; though a reduction in their earnings was the result of the reduction of traffic due to military exigencies. Demands arising from the war necessitated curtailment of expenditure as regards other public works; but approximately Rs. 1 lakh was spent on the completion of the King George Coronation Wing of the Victoria Golden Jubilee Hospital at Sangrur and on the works for the drainage of Sangrur town.

Miscellaneous.

17. There was a satisfactory increase in the number of Co-operative Credit Societies. The relations between the State and the British Police remain most cordial and the valuable assistance rendered by the State Police has been warmly acknowledged by the Punjab Government. Stringent measures were taken by His Highness the Maharaja for the proper surveillance of undesirable returned emigrants from the Far East, Canada and America.

NABHA.

Area, 928 square miles; population, 248,887; approximate revenue, Rs. 19½ lakhs; army and police, 1,532; Maharaja, Ripudaman Singh, Sidhu Jat; aged 34; has no male heir; salute, 11 guns.

Personal.

18. His Highness the Maharaja enjoyed good health during the year, and spent the summer at Dehra Dun and Mussoorie as usual. He attended the Chiefs' Conference at Delhi.

Administration.

19. There were numerous changes of officials from one post to another; but no special remarks are called for.

Crops.

20. Owing to deficient rains the crops were poor.

Railways.

21. The question of the cession of jurisdiction by the Maharaja over lands occupied by the Rajputana-Malwa and North-Western Railways in his territory, which had been pending since the year 1912, was disposed of.

II.—STATES OF THE BAHAWALPUR AGENCY.

22. Lieutenant-Colonel A. C. Elliott, I.A., made over charge of the agency to Mr. W. C. Renouf, I.C.S., on the 16th December 1916.

BAHAWALPUR.

Area, 15,000 square miles; population, 780,641; approximate revenue, Rs. 40 lakhs; army and police, 2,068; Nawab, Sadiq Muhammad Khan, Abbasi, V, Daudputra; aged 12; salute 17 guns.

Personal.

23. There has been a steady improvement in the health of His Highness the Nawab following on his attack of enteric in 1915. His progress was retarded by adenoids and tonsilitis, but an operation in January was entirely successful, and excellent results are apparent. He won three prizes at the last annual examination held at the Aitchison Chiefs' College.

Administration.

24. The State continues to be administered with success by the Council of Regency. The only change in the Council was the reversion of Nawab Malik Talib Mehdi Khan, Revenue Member, to the Punjab, and the appointment of Nawab Malik Khuda Bakhsh Khan to succeed him.

The war.

25. A draft of Imperial Service Troops consisting of one Jemadar and 50 rank and file was sent to the front to reinforce the camel escort. The escort which is employed in Egypt as infantry has done very well. The Darbar continued to show a most loyal and helpful attitude. They contributed Rs. 10,000 towards war comforts, Rs. 2,000 towards the proposed monument to Indian soldiers at Brighton and Rs. 5,000 to the Young Men's Christian Association for the benefit of the Indian Divisions in France. State houses at Lahore and Multan were offered for convalescent officers. Tents were also placed at the disposal of Government. The Darbar supplied 20 horses selected by Major Anderson of the Army Remount Department, free of charge, to Government, for their artillery requirements and 217 camels and 4 ponies with equipment. Officers and men were also recruited from the State for the Mesopotamia Railway Camel Corps. A centre of the St. John Ambulance Association was organised in January last. The Indian Army Order of the 18th January 1915 regarding wound and injury pensions and gratuities and the Army Recruiting rules were introduced into the State during the year.

Crops.

26. The rabi crop during the year under report was below average, but the kharif, in spite of the damage sustained from heavy rains in August, was satisfactory. Settlement operations in the Minchinabad District are proceeding satisfactorily.

Miscellaneous.

27. A Commission, presided over by the Commissioner of Multan and attended by representatives from Sind, Bahawalpur and Dera Ghazi Khan, met in the Dera Ghazi Khan District to discuss the Guddu Dhand question and arrived at a unanimous finding as to future working which is now under the consideration of the various authorities concerned. The question of the permanent boundary with Sind was also discussed there with the Sind authorities. The extradition arrangements between Bahawalpur and Bikaner have at last been finally settled and approved of by Government.

28. The Water Works and Electric Light Schemes have been unavoidably delayed by the difficulty in obtaining plant from England during the war. The Khanpur-Chachran Railway has now been open for six years; but it has not attracted the traffic which was expected when it was constructed, and it appears, from the report of the Senior Inspector of Railways, to be worked at a considerable loss.

Maler Kotla.

Area, 167 square miles; population, 71,144; approximate revenue, Rs. 13 lakhs; army and police, 1,026; Nawab, Sir Muhammad Ahmad Ali, Khan Bahadur, K.C.S.I., Pathan; aged 36; has a male heir; salute, 11 guns.

Personal.

29. The Nawab enjoyed good health throughout the year. His loyal services during the war were recognised by the grant of the rank of Honorary Major in the Indian Army and the increase of two guns in his permanent salute. His Highness visited Mashobra and Simla during the hot weather and while at the latter place paid informal visits to His Excellency the Viceroy and His Honour the Lieutenant-Governor. A niece of His Highness married His Highness the Nawab of Baoni in Central India. The heir-apparent and his brothers under the control of their tutor, Mr. Wakefield, are reported to be making good progress in their education. Miss Allsop continued to be in charge of the

PHYSICAL AND POLITICAL GEOGRAPHY.

two younger sons of the Nawab. The fourth Begam of the Nawab died of consumption at Mashobra on the 10th July. His Highness' second daughter died of enteric fever at Maler Kotla on the 31st August. The Nawab attended the Chiefs' Conference at Delhi in the autumn.

Administration.

30. There was no important change in the administration of the State except that Khan Bahadur Sayyid Abdullah, B.A., Foreign Minister, was made Home Minister, and Shaikh Muhammad Zafar Ali appointed as officiating Foreign Minister in his place.

The war.

31. During the year the Darbar gave Rs. 1,000 each to the Kitchener Memorial Fund, the St. John Ambulance Fund and Lady O'Dwyer's Fund for comforts for the troops. Other offers made by the Darbar and accepted by Government included "The Crags" at Simla for the use of convalescent officers, and offers of *personnel*, horses and mules. The Darbar bore all expenses in regard to these offers. The 1st Company of Imperial Service Sappers is in Mesopotamia with Indian Expeditionary Force "D," and is well above strength. In spite of reinforcements numbering 423 men from the Second Reserve Company sent to Mesopotamia during the year, the Company remained at full strength at headquarters.

FARIDKOT.

Area, 642 square miles; population, 130,294; approximate revenue, Rs. 12½ lakhs; army and police, 371; Raja, Brij Indar Singh, Barar Bans, Jat; aged 20; has a male heir; salute, 11 guns.

Personal.

32. His Highness enjoyed excellent health throughout the year, having spent the hot weather in Simla and Dalhousie as in 1915. His Highness' great-grandmother died on the 7th July 1916 at the ripe age of 100 years. The Raja, by special permission, attended the Chiefs' Conference in the autumn of 1916, a month before his investiture.

Administration.

33. The State continued to be administered by Rai Bahadur Ganga Sahai as Superintendent under the guidance of the late Political Agent Lieutenant-Colonel A. C. Elliott, I.A., up to the 24th November 1916, when the Raja was invested with the full powers of a Ruling Chief at a formal Darbar held by His Honour the Lieutenant-Governor. Since his investiture, His Highness has carried on the administration of the State with the aid of his Secretaries, including Rai Bahadur Ganga Sahai, whose services have been lent for a year as Chief Secretary and Diwan, and whose experience is of great value to the Darbar. He is displaying the closest personal interest in the conduct of the affairs of his State, and shows high promise as an administrator.

The war.

34. The Imperial Service Sappers Company continued to render excellent service in British East Africa. The Company was mentioned in despatches three times, and received high praise from General Smuts. Five reinforcements were sent during the year. In response to a special call in the autumn, the Darbar took special measures for the recruitment of sarwans and muleteers, and supplied 401 men. His Highness' wholehearted efforts to assist Government in regard to the prosecution of the war have been most gratifying; and the long list of patriotic contributions offered by the State and accepted by Government include the cost of four motor ambulances (Rs. 36,000); "Ravenswood," the Raja's Simla residence, placed at the disposal of the Government of India; a contribution towards the cost of the *Gurdwara* to be built at Basra; subscriptions to various war funds; and considerable expenditure in connection with *personnel*, horses, camels and mules.

Miscellaneous.

35. In honour of his investiture His Highness remitted a sum of Rs. 3¼ lakhs of arrears of land revenue. Charitable contributions made by the Darbar included an item of Rs. 16,000 announced at the Sikh Educational Conference at Lahore.

III.—STATES OF THE JULLUNDUR DIVISION.

KAPURTHALA.

Area, 630 square miles; population, 268,133; approximate revenue, Rs. 30 lakhs (inclusive of about Rs. 16 lakhs income from Oudh estates); army and police, 2,416; Maharaja, Sir Jagatjit Singh, Bahadur, G.C.S.I., Ahluwalia Sikh; aged 44; has a male heir; salute, 11 guns; tribute, Rs. 1,31,000.

Personal and Administration.

36. His Highness the Maharaja spent the year in his State with a visit to Mussoorie during the hot weather. Khan Bahadur Mian Abdul Hamid remained in office as Chief Secretary and the administration of the State was carried on very successfully, and was marked by hearty co-operation with the British authorities on all questions.

The War.

37. The offer of the Maharaja for the purchase of motor ambulance launches at a cost of Rs. 25,000 was accepted during the year. He also made the following offers, which were communicated to the Government of India:—

(1) Fifteen beds in the Military Hospital at Kapurthala for the treatment of wounded or convalescent men of the Indian Army—(noted in case of future need).

(2) A contingent of 50 fully equipped camels for use in connection with the War—(accepted).

38. His Highness continued to devote attention to the interests of his Imperial Service Troops which have done valuable service in the field in East Africa.

MANDI.

Area, 1,200 square miles; population, 181,110; approximate revenue, Rs. 7 lakhs; army and police, 360; Raja, Jogendra Sen, Rajput Mandal; minor; salute, 11 guns; tribute Rs. 1,00,000.

Personal.

39. The Raja left Queen Mary's College for the Aitchison College, Lahore, in October 1916. Mr. Parker Gilmore was appointed His Highness' tutor.

Administration.

40. Mr. H. W. Emerson, I.C.S., remained in charge of the State during the year, with Munshi Ganda Mal as Assistant Superintendent; and valuable work was done in bringing the land revenue settlement to a conclusion, and in connection with the forest settlement, the abolition of *begar* and other matters of importance. His Honour the Lieutenant-Governor visited the State in October 1916, and discussed various administrative matters with the Superintendent and officials of the State.

Miscellaneous.

41. The management of the salt quarries by the Darbar continues to produce increasingly good results. The year was marked by the trial of the Mandi branch of the Lahore Conspiracy Case, in which all the chief offenders were brought to justice.

SUKET.

Area, 420 square miles; population, 54,928; approximate revenue, Rs. 2½ lakhs; army and police, 78; Raja, Bhim Sen, Rajput, aged 32; has no male heir; salute, 11 guns; tribute, Rs. 11,000.

The war.

42. His Highness has offered inducements for his subjects to enlist and has also offered a contingent of fifty men under the command of his uncle, Mian Ganga Singh, for the service of the Empire. He also offered to provide accommodation for 50 wounded and invalided Indian soldiers returning from the front but Government were unable to accept the offer owing to the difficulty of access to Suket.

Miscellaneous.

43. His Honour the Lieutenant-Governor visited the State in October 1916.

IV.—LAHORE DIVISION.

CHAMBA STATE.

Area, 3,216 square miles; population, 135,873; approximate revenue, Rs. 3,89,000; army and police, 419; Raja, Sir Bhure Singh, K.C.S.I., C.I.E., Hindu Rajput; has a male heir; aged 48; salute, 11 guns; tribute, Rs. 2,225.

Personal and administration.

44. His Highness maintains a high standard of administration. During October-November 1916 His Honour the Lieutenant-Governor paid a visit to the State.

Miscellaneous.

45. Among other matters which engaged the Raja's attention were the Sham Singh Hospital at Chamba, and the extension of the polo ground at Bankihet below Balun Cantonment, so as to provide a suitable place to be used by the troops for parades and recreation.

V.—STATES OF THE AMBALA DIVISION.

SIRMUR (NAHAN).

Area, 1,198 square miles; population, 138,520; approximate revenue, Rs. 6 lakhs; army and police, 633; Raja, Sir Amar Prakash, K.C.S.I., Rajput; aged 28; has male heir; salute, 11 guns.

Personal and administration.

46. His Highness continued to supervise the administration of his State in his usual able manner. He attended the Chiefs' Conference at Delhi in October 1916; and, during his stay at Simla in September of that year, paid informal visits to Their Excellencies the Viceroy and Commander-in-Chief and His Honour the Lieutenant-Governor of the Punjab.

The war.

47. The Darbar has undertaken to reconstitute the double company of Imperial Service Sappers and Miners to replace the force captured by the Turks at Kut-ul-Amara. The Darbar further made an offer of a bungalow at Kaulagarh Tea Estate, Dehra Dun, for use as a War Hospital; and the Raja's offer of the Bantony Estate at Simla for use as military offices has been accepted by Government.

KALSIA.

Area, 168 square miles; population, 55,909; approximate revenue, Rs. 2,74,000; army and police, 164; Raja, Ravi Sher Singh, Jat Sandhu Sikh; aged 14; no male heir.

Personal and administration.

48. Raja Ravi Sher Singh is doing well at the Aitchison College, Lahore, and has enjoyed very fair health. He is, however, somewhat

weakly and finds the hot weather trying. He went to Mussoorie early in May and stayed till the end of September. Mr. P. M. Lawlor has been appointed as his tutor. The Political Agent visited the State in October 1916 to present the Sanad conferring the title of Raja on the Chief.

49. The State is managed by the Council of Regency consisting of a lent officer as President, and two members. The Excise agreement between the Kalsia State and British Districts of Ambala and Ferozepore has been executed for a further period of five years on payment to the State of Rs. 12,000 per annum instead of Rs. 8,000 paid during the expired period. The Kalsia Forest working plan was revised by the Deputy Conservator of Forests, Simla Division.

50. During the year the Darbar subscribed Rs. 750 to the Brighton Memorial, Rs. 1,000 to the *Gurdwara* at Basra, and Rs. 10,000 to other war funds. An offer of a house at Abdullahpur and of one at Bassi (Dera) for use as hospitals for the wounded was also made and has been noted. The Council also proposed forming a signal unit of 25 men for active service, but the proposal was dropped after consultation with the Military authorities. The war.

PATAUDI.

Area, 52 square miles; population, 19,543; approximate revenue, Rs. 1 lakh; army and police, 77; Nawab, Muhammad Ibrahim Ali Khan, Bahadur, Pathan; aged 29; has a male heir.

51. The State is being efficiently administered by Nawab Muhammad Ibrahim Ali Khan with Khan Bahadur Nasir Ali Khan as his Diwan. The Nawab visited Mussoorie in July 1916. A European governess has been employed for the Nawab's son. Personal and administration.

LOHARU.

Area, 222 square miles; population, 18,597; approximate revenue, Rs. 90,400; army and police, 80; Nawab, Sir Amir-ud-din Ahmad, Khan Bahadur, K.C.I.E., Mughal; aged 57; has a male heir; personal salute, 9 guns.

52. Nawab Sir Amir-ud-din Ahmad Khan, K.C.I.E., administers the State himself. His son, Mirza A'izz-ud-din Ahmad Khan, is Financial Administrator. The Chief was at Simla in September 1916 on a private visit for a fortnight. The Nawab's mother died in August 1916. His youngest son is studying at the Mayo College, Ajmere. An income-tax was introduced in the State with effect from April 1917. There is a likelihood of the Jaipur State Railway line passing through the Loharu State territory. Personal and administration.

53. The Darbar gave fifty more camels and eight mule-drivers for war services. The war.

DUJANA.

Area, 100 square miles; population, 25,485; approximate revenue, Rs. 77,170; army and police, 122; Nawab, Muhammad Khurshaid Ali Khan, Bahadur, Pathan; aged 32; has a male heir; tribute 50 cavalry on requirement.

54. The Nawab administers the State. His Honour the Lieutenant-Governor paid a short informal visit to Dujana in August 1916. Personal and administration.

55. In addition to the 50 camels already given by the State the Darbar made an offer of 10 horses. The war.

VI.—STATES UNDER THE POLITICAL CONTROL OF THE SUPERINTENDENT, HILL STATES, SIMLA.

56. Owing to a misprint in last year's report the Rana of Koti was shown as a tributary of Bashahr, instead of as a tributary of Keonthal. Correction of an error.

PHYSICAL AND POLITICAL GEOGRAPHY.

57. The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles including tendatories.	Population in 1911.	Approximate revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.	Remarks.
				Rs.	Rs.							
1	Bilaspur	448	98,107	3,33,225	8,000	Bijai Chand, C.S.I....	Rajput	44	Raja ...	Yes	204	Permanent salute, 11 guns.
2	Bashahr	3,820	88,957	1,44,442	3,945	Padam Singh ...	Do.	43	Do. ...	Yes (adopted)	13	
3	Nálagarh	256	49,230	1,57,460	5,000	Jogindar Singh ...	Do.	47	Do. ...	No	48	
4	Keonthal	116	25,854	1,00,971	...	Hamendhr Sen ...	Do.	12	Do. ...	No	36	
5	Baghal	124	26,008	66,976	3,600	Bikram Singh ...	Do.	24	Do. ...	Yes	25	
6	Bhagat	36	8,797	50,000	...	Durga Singh ...	Do.	15	Rana ...	No	43	
7	Jubbal	283	28,627	1,98,063	2,520	Bhagat Chand ...	Do.	28	Do. ...	Yes	19	
8	Kumhársain...	90	12,219	30,000	2,000	Vidyadhar Singh ...	Do.	22	Do. ...	No	7	
9	Bhajji	96	14,972	33,504	1,440	Bir Pal ...	Do.	22	Do. ...	No	32	
10	Mailog	43	8,663	27,783	1,440	Durga Chand ...	Do.	11	Do. ...	No	16	
11	Balsan	51	6,225	18,500	1,080	Bir Singh ...	Do.	19	Thakur...	Yes	...	
12	Dhami	26	4,484	30,000	720	Hira Singh, C.I.E.	Do.	53	Rana ...	Yes	25	
13	Kothár	20	4,016	17,000	1,000	Jagjit Chand ...	Do.	40	Do. ...	Yes	8	
14	Kunihár	80	2,203	6,000	180	Hardeo Singh ...	Do.	30	Do. ...	No	9	
15	Mangal	12	1,207	1,000	72	Tilok Singh ...	Do.	19	Thakur...	Yes	...	
16	Bija	4	1,064	5,000	124	Puran Chand ...	Do.	66	Rana ...	Yes	8	
17	Darkoti	8	521	7,000	...	Ram Saran Singh ...	Do.	21	Thakur...	Yes	...	
18	Taroch	67	4,493	50,000	288	Surat Singh ...	Do.	74	Rana ...	Yes	...	
19	[illegible]	15	[illegible]	[illegible]	...	Hira Singh ...	Do.	30	Thakur...	Yes	...	
20	Kanetí	19	2,854	8,590	...	Amra Chand ...	Do.	66	Rai ...	No	...	
21	Delath	42	1,392	2,743	...	Narindar Singh ...	Do.	26	Thakur...	Yes	...	
22	Kotí	50	8,265	44,154	...	Raghbir Chand ...	Do.	67	Do. ...	Yes	56	Tributaries of Bashahr.
23	Theog	144	6,945	14,691	...	Padam Chand ...	Do.	57	Rana ...	Yes	8	Tributaries of Keonthal.
24	Madhan	9	3,901	5,500	...	Randhir Chand ...	Do.	31	Thakur ...	No	6	
25	Ghund	28	1,887	5,610	...	Ranjit Singh ...	Do.	30	Do. ...	Yes	...	
26	Rakash	12	472	700	...	Hira Singh ...	Do.	34	Do. ...	Yes	...	
27	Rávin	7	749	4,591	...	Kidar Singh ...	Do.	49	Do. ...	Yes	...	Tributaries of Jubbal.
28	Dhádi	25	244	1,600	...	Dharm Singh ...	Do.	40	Do. ...	Yes	...	
								29				

58. *Biláspur.*—The Raja paid a visit to Burma, Bengal and other parts of India. Rai Sahib Durga Singh, Wazir of the State since 1909, was succeeded in 1916 by Diwan Indar Singh, late President of the Nálagarh Council. Owing to the Raja's activities 503 recruits have been enlisted from the State since the beginning of the war.

59. *Bashahr.*—The Tikka Sahib is doing very well at the Aitchison College. Mr. Mitchell, I.C.S., whose term of office was extended for a further year at the request of the Raja continued to act as Manager. Recruiting seems likely to become popular with the Kanaits of the State.

60. *Nálágarh.*—The Raja has no heir and has been unable to arrange a marriage for his daughter. The State has furnished 52 recruits to the Army.

61. *Keonthal.*—The youngest daughter of the late Raja was married to the Tikka of Vizianagram. Rai Sahib Mian Amar Singh has been succeeded as Manager by M. Sher Singh, lately Wazir of Jubbal. Stricter control and amalgamation of the management of reserved and undemarcated forests are paving the way for a considerable increase in the forest

revenue. The acquisition of the Chair catchment area has been sanctioned by Government on payment of an annual cash compensation.

62. *Baghal.*—Arrangements are being made for the Tikka, who is now 8 years of age, to be sent to Queen Mary's College. Lala Kharku Ram has been replaced as Manager by Rai Sahib M. Durga Singh, previously Wazir in Bilaspur. The State has supplied 25 recruits for the army.

63. *Bhagat.*—During the year the State subscribed Rs. 6,400 to Government in aid of the expenses of the war, and supplied 16 recruits.

64. *Jubbal.*—A third son and a daughter have been born to the Rana. The Rana has collected some 60 recruits.

65. *Kumhársain.*—Both the Rana and the Rani have been ill during the greater part of the year. A second son was born to the Rana during the year, but died after a few days.

66. *Bhajji.*—The Rana has been sent to the Aitchison College where he is doing well.

67. *Mailog.*—The health of the Thakur was indifferent during the summer. It is hoped to arrange his betrothal with the elder sister of the Raja of Baghal.

68. *Balsan.*—The son of the Rana, who was born in 1915, has died.

69. *Dhami.*—The Rana has finished the settlement of his State.

70. *Kothár.*—The Rana is completing the settlement of his State. He has contributed Rs 5,000 to war funds.

71. *Kunihár.*—The Thakur's younger brother has been married to the sister of the Thakur of Bija.

72. *Taroch.*—The Tikka Sahib has been sent to the Aitchison College.

73. *Koti.*—The settlement report has been submitted to Government for orders. The daughter of the Rana has been married to the Tikka Sahib of Suket. A few recruits have come forward from the State.

FRONTIER AFFAIRS.

74. The year has been a comparatively quiet one. The only really important case was a raid on Mangrotha by a gang of well-armed Pathans in September 1916. They were tracked into Baluchistan territory and the Baluchistan authorities are still unsuccessfully investigating the case. Under the orders of Government a Conference was held in December 1916 to report on complaints by the Sind authorities against the construction of a regulator in the Guddu Dhand by the Hon'ble Nawab Sir Bahram Khan, K.C.I.E., Mazari. Representatives of the Punjab, Sind and the Bahawalpur State attended and a report was submitted. The orders of Government had not been received at the close of the year.

75. Sardar Lashkar Khan's administration of the Gurchani Tuman was not entirely satisfactory. The young Sardar Jamal Khan, Tumandar of the important Leghari tribe, has shown considerable improvement. He now takes great interest in his duties, and during the year was invested with 1st Class powers. He is now on good terms with his cousin Khan Bahadur Sardar Din Muhammad Khan, C.I.E., who assists him in the tribal administration. Sardar Mubarak Khan has died and has been succeeded as Tumandar of the Khosas by his cousin Sardar Ghulam Haidar Khan. The new Tumandar is young and well intentioned. If he develops into a good Chief this notoriously ill-behaved tribe may improve. The title of Khan Bahadur was conferred on Sardar Ghulam Husain Khan, Sori Lund Tumandar, in January 1917. Sardar Mahmud, grandson of the aged Tumandar of the Kasranis, who was acting for his grandfather, has for some time past been addicted to drugs. In October 1916, he murdered his wife. He has been found to be insane and is now incarcerated in a criminal lunatic asylum. Sardar Imam

PHYSICAL AND POLITICAL GEOGRAPHY.

Bakhsh Khan, second son of the Tumandar, has been selected to act as Tumandar and has been given 3rd Class powers. There were two notorious Kasrani outlaws at large at the commencement of the year, both named Bungal. One has been shot and the others arrested, tried and convicted. There is now peace in the Kasrani country. Sardar Paind Khan, acting as Tumandar of the Bozdars for his aged and infirm father, continues to do well. The behaviour of this tribe has been good.

76. The Jirga system has worked as satisfactorily as last year. The Chiefs' Jirga under the able presidency of the Hon'ble Nawab Sir Bahram Khan, K.C.I.E., has done excellent work both in district cases and in cases with the neighbouring Baluchistan agencies. The amount of fines and compensations outstanding has been reduced, but still is large, and the matter is receiving due attention from the Deputy Commissioner. Jirgas are somewhat prone to recommend compensation which is out of proportion to the accused's means, and this accounts to a great extent for the large unrealised balances.

9.—Condition of the People.

77. The year was a healthy one except in the last quarter when owing to the heavy and prolonged monsoon rains malaria was prevalent and caused a high mortality. The general birth-rate was 2 *per mille* above that of the previous year and was the highest in India for the year under report, and the highest for the province for the last 14 years. The death-rate was 5·6 *per mille* below that of the previous year. The improvement in the birth and death rates was due to the mild incidence of plague and cholera during the year. The incidence of plague was the mildest since 1900.

78. The good autumn harvest and the prevalence of high prices brought prosperity to the agricultural population. The high level of wages was maintained and the labouring classes benefited accordingly. In a few districts labour was scarce owing to continuous recruitment for the army. In spite of the war, perhaps to some extent in consequence of it, the agricultural condition of the Punjab was distinctly prosperous.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this Chapter will be found in the reports and statistical tables noted below : —

PROVINCIAL REPORTS.

Realization of the Revenue—
Revenue Surveys and Settlements— } Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1916.

Professional Surveys.—General Report on the Operations of the Survey of India for the year ending 30th September 1916.

Waste Lands and Government Estates.
1. Annual Report on the Punjab Colonies for the year ending 30th September 1916.
2. Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1916.

Wards' Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1916.

Revenue and rent-paying classes.—Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1916.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I.

Area Totals—Table 1 J.	Transfers of Land—Table 6 H.
Classification of Area—Table 2 I.	
Incidence of Land Revenue—Table 5 I.	Changes in Boundaries—Appendix B.

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and collection.

79. The fixed land revenue demand rose from Rs. 217 lakhs to over Rs. 226 lakhs. New assessments in Kángra, Hoshiárpur, Jullundur, Siálkot and Gujrát accounted for an increase of Rs. 12 lakhs while another lakh was due to the formation of new estates in Gujránwála. A nominal decrease of Rs. 4¼ lakhs was due to the erroneous exclusion of new assessments in two tahsils of the Siálkot District from the fixed revenue roll. Leaving out of account the amount under suspension at the end of the year and irrecoverable and undetermined balances, the whole of the demand put down for collection was recovered with the exception of Rs. 8,000, and this was effected without recourse to the issue of coercive processes on an abnormal scale. Owing to the failure of the monsoon, suspension of revenue had to be granted on an unusually lavish scale especially in the Hissar, Gurgaon and Rohtak Districts, and altogether about Rs. 12·77 lakhs were suspended as compared with less than Rs. 1·5 lakhs in the previous year and an average of about Rs. 5 lakhs.

Reverain action.

80. The action of the rivers resulted in a net addition of Rs. 10,000 to the fixed revenue roll. The total assessable area of the province was increased through alluvion by 9,000 acres and the revenue demand was enhanced on account of improvement by deposit of silt on 53,000 acres, while it was reduced for deterioration on only 15,000 acres

FLUCTUATING LAND REVENUE.

Demand and collection.

81. Collections of true fluctuating revenue fell by nearly Rs. 6½ lakhs to about Rs. 122 lakhs, the decrease being due to the failure of the rains and low river floods which prejudiced the working of inundation canals, particularly in the Ferozepore, Shahpur, Multán and Montgomery Districts.

OTHER LAND REVENUE.

Demand and collection.

82. Collections of "other land revenue" amounted to Rs. 38·3 lakhs, a decrease of over Rs. 3 lakhs as compared with the previous year. This falling off was due partly to the continually decreasing amount realized for purchases of proprietary right in the older colonies and partly to the contraction of receipts from single harvest leases which marks the progress of permanent allotment in the Lower Bari Doab Colony. Income from the

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sale of Government waste lands amounted to about Rs. 25·75 lakhs, about the same as in the previous year.

MISCELLANEOUS.

83. In spite of the trying conditions of the year the number of coercive processes issued fell by 10 per cent. to 16,129, of which about 11,000 were merely writs of demand. In only 10 cases was resort to imprisonment necessary and in only three was immoveable property attached. The Multán Division again accounted for more than half the total number of processes, a result of the continued efforts which are being made to enforce punctuality of payment. In Lyallpur where a demand of 1¼ crores of rupees was collected, only 138 processes had to be executed, a most striking proof of the prosperity of the district and of the good effects of insisting on punctual payment from the outset.

11.—Professional Surveys.

Surveys.

84. Riverain surveys were carried out by the Punjab Riverain Detachment of the Survey Department on the Sutlej, Beas and Indus in connection with the Ambála, Jullundur, Kángra and Dera Gházi Khan settlements. The work included 155 linear miles of main circuits and 751 of minor traverses, and 4,431 theodolite stations were fixed in an area of 559 square miles which is under water action. One hundred square miles were demarcated with permanent mark stones in the Kángra, Hoshiárpur and Gurdáspur Districts. Settlement Officers were supplied with 852 plotted and 142 boundary sheets, at a cost of Rs. 28,706. The Kángra special survey under the same party traversed and triangulated 2,162 linear and 300 square miles of the district area and 12,067 stations were fixed by theodolite in 575 hamlets. 3,542 plotted sheets of 792 hamlets were supplied to the Settlement Officer at a cost of Rs. 43,881. The same party completed work in the Kotgarh Tahsil of Simla; they traversed and triangulated 1,066 linear and 15 square miles and fixed 1,153 stations by theodolite. Two hundred and fifty-six plotted sheets of 70 villages were supplied to the Settlement Officer at a cost of Rs. 3,033. Minor operations included special surveys of the Attock oil fields, of the Kángra road and of the Lahore Cantonment boundaries, at a total cost of Rs. 2,267.

85. Topographical survey operations were continued and an area of 2,206 square miles on the scale of 1 inch to the mile in the Gurgaon, Hissar and Rohtak Districts, and in Dujána, Jínd, Loháru, Nábha, Patiála and Pataudi States was surveyed.

Boundary delimitation.

86. The case of the fixed boundary on the Jumna has not progressed since last year's report. A boundary dispute between villages of Gurgaon and Alwar State remained unsettled at the close of the year, and a dispute between a village of the Hissar District and Bíkáner State and three cases between the Jullundur District and Kapúrthala State are pending. The boundary of the Jammu State and the Gurdáspur District has been finally settled, but there are questions outstanding in connection with Siálkot. An area in dispute between the Miánwáli and Kohat Districts has been left till next settlement as a common grazing ground to the villages concerned, as it was found that it would require an extensive survey to determine to which of the two districts the debateable land belonged. A dispute between Miánwáli and Bannu still awaits disposal.

12.—Revenue Surveys and Settlements.

87. At the close of the previous year measurements and record work remained in progress in the settlements of the Gujrát, Jullundur, Simla and Kángra Districts. During the year they were completed in the first two, while in Simla the record-of-rights has been finally attested in all but a few villages. *Killabandi* was completed in Gujrát except in a few villages. In Kángra attestation was finished in the Pálampur Tahsil, but much remains to be done before the record-of-rights is complete.

88. Orders were passed on the assessment reports of the Simla and Kot Khái *ilaqas* in the Simla District, and of the Jullundur, Nakodar, Nawashahr and Phillaur Tahsils and of the urban areas of the Jullundur District either during the year or shortly after its close. In Kángra orders were passed on the assessment reports of the Pálampur and Kángra Tahsils during the year. Orders were also passed on the assessments of the Lahore Tahsil and of town lands in the Lahore District, the demands announced and the distribution completed.

89. Orders were passed on the final reports of the Chenab Colony, Lahore, Gujrát, Ferozepore and Hoshiárpur-Una settlements. The Ferozepore settlement was confirmed for 30 years subject to the proviso that if within that time a new large canal taking out of the Sutlej is constructed, the settlement of the villages commanded by it shall be revised. The settlement was completed in 4½ years at a cost of Rs. 4½ lakhs and the net annual increase of Government revenue will eventually be between Rs. 5½ and 6 lakhs. The Hoshiárpur settlement was also confirmed for 30 years. It cost Rs. 5½ lakhs and took 4½ years to complete, and resulted in an enhancement of the demand by Rs. 4¼ lakhs. The term of settlement of the Dera and Hamírpur Tahsils of Kángra has been fixed at 30 years, but detailed orders on the report have been deferred pending the completion of settlement operations in the other tahsils of the Kángra District. The duration and cost of each of the settlements and the enhancements taken in each will be found in Statements XIII and XIV appended to the report on the Land Revenue Administration of the Punjab for the year ending 30th September 1916. The cost of the Lahore settlement operations will be recovered in about two years from the enhancement and that of the Siálkot settlement in the same period. In Shahpur the enhancement of one year is nearly sufficient to defray the cost. In Gujrát, the least productive settlement, three years of the initial increase will meet the expenses of the operations. Settlement operations began in Ambála on the 1st October 1915 and in Dera Gházi Khan on the 1st October 1916.

13.—Land Records.

Patwaris.

90. The conduct and efficiency of patwaris during the year was on the whole satisfactory. Dismissals were not in the main due to bad conduct but to inefficiency and absence without leave, which are to be attributed chiefly to the poor prospects of advancement. The block in promotion due to the necessity of absorbing a large number of settlement kanungos is however coming to an end and a return to the normal flow of promotion for patwaris may soon be expected. The educational qualifications of patwari candidates are steadily improving, and 44 per cent. of them possess at least middle school qualifications.

Kanungos.

91. The closer attention paid to inspection and supervision of the work of kanungos is resulting in their gradual improvement. The experiment of empowering kanungos to attest mutations in cases of undisputed inheritance has been abandoned as infructuous. The further experiment of confining the district kanungo solely to office work and stopping his touring is still in progress in the Hoshiárpur, Miánwáli, Gurgaon and Jullundur Districts.

Records.

92. During the year four settlements were brought to a close in the Shahpur, Gujrát, Lahore and Siálkot Districts. In the Jullundur, Kángra, Ambála and Simla Districts the revision of the record was in progress. The work was practically completed in Jullundur and has been proved to be good by inspection. The Pálampur Tahsil records are still incomplete and the system under which their preparation was postponed till the completion of measurements has been shown to be unsatisfactory.

14.—Waste Land and Government Estates.

The old Colonies.

93. The Lower Jhelum Canal Colony is the only one of the older colonies which is now considered as a colony. In the Lower

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Chenab and Chúnián Colonies the process of allotment has been completed and they have reached a stage of development which puts them on a level with the older districts of the Province, and their exclusion from the scope of the annual report on Punjab colonies marks the close of the treatment of these areas as colonies and not merely as portions of the districts in which they are situated. In the Lower Jhelum Colony the working of the service conditions has been complicated by the problem presented by the numerous horse-breeding grantees who are minors. To meet this difficulty it has been arranged that if satisfactory arrangements have not been made by a minor tenant's natural or legal guardian, the Collector should leave not more than half the tenancy during such tenant's minority to any person who will undertake the horse-breeding obligation attaching to the tenancy.

The Upper Chenab Colony.

94. In the Upper Chenab Colony 24,000 acres out of a total allotable area of 81,000 acres still remain to be distributed. The allotment of the perennially irrigated area was practically concluded during the year and considerable progress was also made with the area which receives irrigation only for the autumn crop. Revised arrangements for the colonisation of this area are now being made with a view to removing the difficulties which have so far stood in the way of success.

The Lower Bari Doab Colony.

95. In the Lower Bari Doab Colony the year was one of substantial progress. During the year 75,387 acres were allotted, including 14,442 acres sold by auction. The average price realised at the auction—Rs. 179 per acre for land irrigated by flow—was lower than in the previous year, but the quality of the land was inferior and the price suffered from the attempt to sell too much at once. A resurvey of the land on this colony has shown that the commanded culturable area amounts to about 320,000 acres less than was originally estimated. Most, however, of the special features of the scheme have already been provided for, and the year under report saw the allotment of the fourth of the large cattle farms—in this case for breeding Montgomery cattle—and a beginning made in the allotment of the hereditary landed gentry grants. A considerable portion of the land not immediately culturable by ordinary methods consists of saline lands which may eventually be rendered fit for cultivation by the methods of reclamation which have proved so successful on a small scale on an experimental farm near Lyallpur worked by the Agricultural Department. The eastern part of the colony now has a look of settled prosperity with comfortable villages, ample irrigation and excellent crop. Further west, where the soil is less fertile, the advance has been slower but progress is being steadily made.

Towns and Roads.

96. The programme of road construction is still steadily progressing and 103 miles of unmetalled and 6 miles of metalled road were completed during the year in the Montgomery District. In Multán 205 miles of unmetalled road have now been constructed and some metalling done in the approaches to the Khanewál Mandi. The new town of Okára is growing rapidly and sites have been sold at Chíchawatni. Plans for towns and markets at Khanewál, Mián Channu and Jahánián have also been sanctioned.

The Upper Jhelum Colony.

97. About two-thirds of the available area in the Upper Jhelum Colony have now been allotted, including about 4,000 acres granted in reward of services to the criminal administration in the Ráwalpindi Division and 7,200 acres for an irrigated plantation. Irrigation is now expected to begin and as the land is of good quality and favourably situated effective colonisation should be speedy.

15.—Wards' Estates.

98. Excluding the Basírpur estate, which was released on the death of the ward and resumed on behalf of his minor heirs, 7 estates were released from and 3 taken under management. The most important

of the estates released was that of the late Sardar Hardit Singh of Ráwalpindi, which was under management for 10 years. During this period Rs. 11¼ lakhs were spent on permanent improvements and the value of the assets increased by Rs. 17¼ lakhs. The amount invested in land by various estates was considerably less than in the previous year. Investments in loans and contributions to the Punjab Aeroplane and other war funds, charities and public institutions amounted to about Rs. 1 lakh or rather more than 5 per cent. of the total ordinary income of the estates. Nearly Rs. 2 lakhs were spent on permanent improvements and in various directions examples are being set of enlightened and public-spirited management. Three estates have sent employees for training to the Agricultural College at Lyallpur, and quarters are now being built there for the accommodation of any wards and other potential owners of large estates who may choose to complete their education by taking a course in scientific agriculture.

16.—Revenue and Rent-paying Classes.

General.

99. The area of the Province entered in the revenue records is somewhat over 54½ million acres, of which more than half is cultivated. Fifteen million acres consist of common lands, village sites and Government property, and of the rest 34 million acres are owned by agricultural tribes and 5½ million acres by others. Re-measurement in the course of settlement operations has resulted in the large increase of 28,000 acres in the total recorded area of the Lahore District and less marked variations in Gujrát and Shahpur and re-measurements at the quadrennial attestations and alterations of district boundaries account for minor changes elsewhere; the decrease of 29,000 acres in the Dera Gházi Khan District is due to an error in past reported figures which has now been discovered. The increase in the cultivated area is largely due to colonization in Montgomery and Gujránwála. Cultivation has also considerably extended in Hissar, Karnál, Ferozepore, Lahore, Lyallpur, Jhang and Multán, but decreased largely in Miánwáli owing to the failure of the rains. The cultivated area under mortgage has slightly increased, but owing to the expansion of cultivation the percentage mortgaged has fallen from 11·6 to 11·5.

Loans Act.

100. The demand for loans for land improvement was even smaller than in the previous year; less than Rs. 1½ lakhs was thus advanced, though the fact that 101 new wells were constructed during the year with *takavi* advances in the Ferozepore District is sufficient proof of what can be done by a judicious loan policy without attempting to create an artificial demand. The failure of the rains and the scarcity of fodder were responsible for a very large enhancement from about Rs. 2½ lakhs to Rs. 8 lakhs in the amount advanced under the Agriculturist Loans Act, 1884, and the liberal advances made in the districts of Gurgaon, Rohtak and Hissar enabled the cultivators to take advantage of the good monsoon of 1916 and to retrieve their position.

Transfers.

101. The cultivated area, 106,799 acres, sold during the year was the smallest recorded in the past 20 years, but there was a noticeable increase in the area of uncultivated land sold, 126,700 acres having been so transferred as compared with 86,690 acres in the previous year. Much of the increase is accounted for by extensive purchases of waste land made in the Thal portion of the Leiah Tahsil of Muzaffargarh in anticipation of the construction of the Sind Ságar Canal. A further larger area of waste amounting to nearly 20,000 acres was sold in that tract by the *ala maliks* or superior proprietors. The year under report is the second complete year of the working of the Redemption of Mortgages Act, and Statement XXVIII appended to the report on the Land Revenue Administration of the Punjab, 1916, shows that 2,708 cases were disposed of under this Act. Most district reports mention the working of the Act with favour as giving a simple means of redeeming small mortgages, but it cannot be said to have had an appreciable effect on the total cultivated area redeemed, the year's figure, 210,067 acres, being the lowest for the

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past 10 years. The cultivated area mortgaged was 227,396 acres and though this is less than in the previous year, it is the first time in the last five years that the area mortgaged has exceeded the area redeemed.

Value of land.

102. The average price of cultivated land rose from Rs. 180 to Rs. 216 per acre. This although not so high as the figure of 1913-14, is much higher than in any other preceding year. The figures do not, however, give a reliable indication of the real selling price of land owing to the fact that when cultivated and uncultivated lands are sold in one transaction there is no means of ascertaining the portion of the price which represents the value of the cultivated land. A provincial average price has indeed little real economic meaning in view of the wide variety of local conditions and of local prices which run from hundreds of rupees per acre for building sites near towns to less than a rupee in the Thal, but the fact that in the province as a whole the sale value of land represented 151 times the land revenue as compared with 144 times in the previous year and 63 times 20 years ago is a remarkable testimony to the steady and extraordinary rise in values within the present generation.

Land Alienation Act.

103. The only new tribe notified under the Land Alienation Act was the Muhial Brahmans of Attock. During the year agricultural tribes acquired by purchase a net increase of nearly 20,000 acres. The area sold by them—206,529 acres—has never been exceeded since the passing of the Act, but sales to them have only been surpassed in one year and in no year have the sales to others been so small. There was a net loss on mortgage by agricultural tribes of some 26,000 acres as compared with 8,000 acres last year. Unfavourable seasons contributed to the increase both of sales and of mortgages, and whereas in the case of sales wealthy agricultural tribesmen are the most ready, not to say eager, buyers, others are more commonly forthcoming as mortgagees, though the forms of mortgage permitted by section 6 of the Alienation of Land Act can scarcely be said to be popular among money-lenders. Cases of evasion of the Act exist, but are not very common.

Rent-Paying classes.

104. The number of suits for enhancement of rent (2,768) and that of successful suits (2,271) were both double the figures of 1914-15. As in the previous year, the number of suits instituted in the Gujrát District, 1,880, was higher than in any other district, a result of the new assessments. There was also a marked increase in Ferozepore and Siálkot in both of which districts it is noted that cash rents are rising with prices. There were 92 decrees for ejectments of occupancy tenants under section 39 of the Act, 66 of which were in Hoshiarpur and Shahpur, and in each case ejectment was actually made. The total number of ejectments of occupancy tenants actually made in the province was 96. There was a slight drop in the number of applications for service of notice to tenants-at-will, and the ejectments actually made fell from 6,099 to 4,881.

Miscellaneous.

The Punjab Land Preservation (Chos) Act.

105. Financial considerations precluded any progress being made in the notification of further areas in Ambála and Hoshiárpur under the Punjab Land Preservation Act, but the herding and pasturing of camels in areas already notified under the Act in Hoshiárpur was forbidden during the year at a cost of about Rs. 12,000 for compensation to camel owners. Compensation awarded in Ambála in consequence of the notification of certain areas in the previous year under section 4 of the Act amounted to Rs. 82,000. The restrictions already imposed and the afforestation which has been effected are producing perceptible and valuable results in the two districts concerned.

The Descent of Jagirs Act.

106. The rule of primogeniture was notified under the Descent of Jagirs Act as existing in the Jagir of Malik Muhammad Yaqub Khan of Mitha Tiwana in the Shahpur District.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1916.

(2) Report on the working of the Criminal Tribes Act for the year 1916.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1916.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1916.

Prisons.—Report on the Administration of the Jails in the Punjab, 1916.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1916.

Registration.—Report on the Administration of the Registration Department of the Punjab for the years 1914, 1915 and 1916.

Legal affairs of Government.—Report on the Administration of the legal affairs of the Government of the Punjab for the year 1916.

Local Boards Administration.—Report on the Administration and accounts of the District Boards in the Punjab for the year 1916-17.

Municipal Administration.—Report on the working of Municipalities in the Punjab during the year 1916-17.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical abstract for British India, Volume IV, Administrative and Judicial (including area, population and local funds).

17.—Legislating Authority during the year 1916-17.

107. The constitution of the Council was amended by Government of India Notification No. 20, dated the 30th March 1916. The number of elected members was increased from 8 to 11, four members to be elected by Municipal and Cantonment Committees, and five by District Boards. The number of nominated members was also increased from 16 to 17. These changes were carried out in the triennial re-elections and renominations which took place in May and June. The following changes took place subsequently :—

(1) The Hon'ble Mr. D. W. Aikman, C.I.E., was nominated in place of the Hon'ble Mr. T. R. J. Ward, C.I.E., M.V.O., M.I.C.E., resigned.

(2) The Hon'ble Mr. J. A. Richey was nominated in place of Mr. J. C. Godley, C.S.I., resigned.

(3) The Hon'ble Khan Bahadur Khwaja Yusaf Shah was nominated in place of the Hon'ble Khan Zulfiqar Ali Khan nominated as an additional member of the Imperial Council.

(4) The Hon'ble Risaldar Partab Singh, Sardar Bahadur, was nominated in place of Sardar Bahadur Sardar Sundar Singh Majithia, elected as an additional member of the Imperial Council.

18.—Course of Legislation for the year 1916-17.

108. Four meetings of the Legislative Council were held during the year under report, two in Lahore and two in Simla.

109. Two Bills, *viz.* (1) The Juvenile Smoking Bill and (2) The District Boards Act (Amendment) Bill, were introduced in Council during the year. The first was circulated for opinion and the second was withdrawn.

110. Out of the following six resolutions—

(1) resolution regarding Lord Hardinge's Viceroyalty;

(2) resolution regarding Municipalities in the Punjab;

(3) resolution on the sudden demise of the Right Hon'ble Earl Kitchener of Khartum;

(4) resolution regarding teaching and study of vernaculars;

(5) resolution regarding establishment of an Executive Council in the Punjab;

(6) resolution regarding appointment of the representative of the Muhammadans of the Punjab on the India Legislative Council by election in place of nomination—

the second was lost while the others were carried. The official members did not vote on (5) and (6) while (4) was accepted by Government in an amended form.

111. One hundred and eighty-nine questions were put and answered.

INDIA ACTS.

112. No Acts particularly affecting the Punjab were passed by the Imperial Legislative Council during the year.

19.—Police.

GENERAL POLICE FORCE.

General.

113. The number of true cognisable cases of all kinds dealt with by the police in 1916 was 6,197 or 14 per cent. less than in the previous year. Excluding petty offences under local and special laws there were only 28,937 true cases in 1916 as compared with 35,597 in 1915—a decrease of 24 per cent. The year 1916 marked the complete disappearance of the serious disorder and lawlessness of 1915 and recorded crime dropped to a level lower than has been reached since the year 1910. The factors responsible for the general improvement were the subsidence of political unrest: the fall in prices following on better agricultural conditions: special measures organized to cope with bands of wandering criminals: the diversion of the energies of the wilder spirits in the province to the various spheres of military activity: and, finally, the increased confidence in and consequently improved co-operation with the police that has characterised the attitude of the public towards the criminal administration. As in the previous two years the policy of taking prompt action against village officers and communities guilty of sins of omission and commission towards the criminal administration, and on the other hand of promptly rewarding good service, has been steadily pursued. Forty punitive police posts were in existence at the end of 1916, and 666 village officers were punished during the year for failure of duty. Punitive posts have again shown their efficacy, especially in the case of the combined punitive levy imposed on the Jhang, Muzaffargarh and Multán Districts as a consequence of the dacoities of the spring of 1915, and in the case of a post imposed on a village in the Attock District in consequence of the misconduct of its inhabitants in harbouring a notorious military deserter who, when an attempt was made to arrest him, shot at and wounded a Sub-Inspector and escaped with the connivance of the villagers. In the former case the levy was withdrawn, as, during 1916, the districts affected were singularly free from violent crime and lawlessness, and it was found possible to allow the return of the local men of influence who had been expelled from their districts for complicity in the outbreak of 1915. In the latter case so effective was the action taken that the absconder was produced within a week of the location of the post, and in recognition of this speedy submission to authority the period of location of the post was reduced by the Lieutenant-Governor from one year to six months.

114. On the other hand, within the last three years in addition to cash rewards amounting to about Rs. 75,000, land revenue to the amount of Rs. 22,000 has been remitted to village communities which have rendered signal assistance, while over 200 grants of land have been made to individuals for specially valuable service to the criminal administration. These grants have undoubtedly done much to encourage the public to accept the risks which resistance to and pursuit of dangerous criminals so often involve.

Murders and dacoities.

115. The total number of murders, 524, was slightly higher than the previous year's aggregate, but 13 less than the average of the previous four years. Except in Shahpur the fluctuations in districts from the record of 1915 appear to be largely fortuitous. Against the small increase in the number of murders in 1916 may be set the decrease of 10 cases of culpable homicide and attempted murder. There were only 315 true cases of dacoity and robbery during 1916 as compared with 565 such cases in the previous year. The figures for 1915 were indeed inflated by the disturbances in the Jhang, Muzaffargarh and Multán Districts, but not to an extent approaching the decrease recorded during 1916.

Burglaries and theft.

116. Burglaries decreased from 17,337 in 1915 to 13,477 in 1916, a drop of 3,860 cases, which is mainly attributable to the rounding up of several gangs of wandering criminals from down-country, and to the rapidly growing popularity of the indigenous systems of watch and ward known as *thikri-pahra* and *nakabandi*. Thefts similarly show a decrease of 1,459 cases, the figures being 5,753 in 1916 and 7,212 in 1915.

Police working.

117. The general improvement in detection and prosecution that set in from the beginning of 1913 was maintained during the year. The all-round percentage of cases convicted to true cases rose from 30 in 1915 to 32·7 in 1916, while the percentage of cases and persons convicted to cases and persons tried advanced from 71 and 56, respectively, in 1915, to 71·7 and 57·29 in 1916. In detail the general improvement is shared in all classes of cases, except in the case of dacoities, where the percentage fell from 60 in the preceding year to 48: a figure, however, well above those of the years immediately preceding 1915.

Preventive measures.

118. Though the number of persons called upon to furnish security was considerably less than in 1915 it was 35 per cent. higher than the figure of 10 years ago. A Bill for the restriction of habitual offenders is now under the consideration of Government, and a further measure with the object of legalizing the *thikri-pahra* and *nakabandi* systems of village patrols is also contemplated.

Disregard of authority.

119. Instances of unusual lawlessness and defiance of constituted authority were on the whole remarkably few in number, being practically confined to the Ferozepore District in which a gang of ferocious dacoits, which has since been broken up, after wreaking vengeance on personal enemies, harried the neighbourhood thoroughly and indiscriminately.

Criminal Investigation Department.

120. The burden of work which fell during 1916 on the shoulders of the Criminal Investigation Department, if less serious than in the previous twelve months, was sufficiently heavy to keep its energies fully occupied. There was, indeed, no recrudescence of the lawlessness directly associated with the revolutionary movement: but the aftermath of the *Ghadr* conspiracy was evident in the Second Supplementary Lahore Conspiracy Case, in which out of 17 accused, 6 were sentenced to death, 5 to transportation and another to imprisonment: in the Mandi Supplementary Case, in which at the close of the year 5 offenders of the State were convicted and sentenced to terms of imprisonment ranging from transportation for life to 18 months; and also in the Rawalpindi Bomb Case, in which several returned emigrants who had been convicted in the First Lahore Conspiracy Case plotted with certain warders to assassinate with bombs the Superintendent and other officials of the jail. Three of the ringleaders were convicted by the Lower Court and awarded exemplary sentences. All these cases, as well as numerous other important investigations, were conducted by the Criminal Investigation Department.

PROTECTION.

Finger Print Bureau.

121. During the year 29,772 references were received by the Finger Print Bureau at Phillaur for search, of which 5,738 were traced, as compared with 34,751 references and 5,856 traced in 1915. The number of finger impression slips on record at the end of the year was 230,923 as compared with only 162,496 in 1906.

Internal economy.

122. During recent years the inadequacy of the pay of the lower ranks of the police force had been repeatedly forced on the attention of Government. The rates of pay for constables and head constables had been fixed as a result of the report of the Police Commission in 1905. The minimum pay was Rs. 8 per mensem which rose after 3, 10 and 17 years' service to Rs. 9, Rs. 10 and Rs. 11, respectively. Economic conditions have, however, owing to the advance in prices and wages, changed very materially since these rates were regarded as an adequate wage. The position had been further aggravated since the outbreak of war by the extraordinary demands made by the army and its subsidiary services on the manhood of the province and by the enlistment of recruits for the police of two other provinces which offered higher rates of pay than those obtaining in the Punjab. Accordingly, with effect from the 1st April 1916, revised rates of pay for constables were brought into force. For the first 3 years they will receive Rs. 10 per mensem, and after 3, 10 and 17 years Rs. 11, Rs. 12 and Rs. 13, respectively. Head constables had hitherto been graded in three classes, drawing, respectively, Rs. 15, Rs. 17-8-0 and Rs. 20 per mensem. With a view to the encouragement of a better educational standard in the higher grade of head constables from which promotions to the rank of Sub-Inspector are made, a new first grade drawing Rs. 25 per mensem was created. The estimated extra cost to Provincial revenues of these charges is over Rs. 4½ lakhs of which half has been provided by the revision of establishment explained below.

123. Concurrently with the raising of the rates of pay of constables and head constables a revision of the strength and re-distribution of the force in accordance with present conditions has been effected. The vast extension of canal irrigation in the province, together with improved facilities of communication by road and rail, have naturally been followed by great fluctuations of population in some districts and by the growth of new, and the decline of many old, towns. As the result of enquiries pursued in each district by an officer placed on special duty, it was found possible to effect a reduction of 34 Inspectors, 42 Sub-Inspectors and 842 constables from, and an addition of 117 head constables to, the permanent establishment, resulting in a saving of over Rs. 2¼ lakhs on establishment charges alone.

Rural Police.

124. During the year, 25 zaildars, 320 village headmen and 321 village watchmen were punished for failing to assist the police and for neglecting their duties, while rewards were granted to 547 headmen and 334 watchmen for services to the criminal administration.

Criminal Tribes.

125. During 1916 there was a substantial decline from 619 to 481 in the number of convictions in all classes among the settled criminal tribes, and a satisfactory decrease in the number of absentees. By the end of the year arrangements for the restriction and reformation of wandering criminal tribes were completed. Formerly the surveillance of wandering tribes was spasmodic and lacking in co-ordination owing to the want of a central supervising agency. A strong central agency has now been formed and the scheme for the reclamation and reformation of these tribes includes, besides complete registration, projects for the establishment of a number of settlements, reformatory, industrial and agricultural.

Chemical Examiner.

126. There was a slight increase in the number of cases investigated by the Chemical Examiner, due to the extra work involved in the examination of articles to be supplied to troops on service. There was some decline in medico-legal work: this, however, represented no decrease in crime but the greater use made of the services of the Imperial Serologist.

127. Human poisoning cases again constituted nearly half the medico-legal work done. Arsenic was the most common form of poison used, being found in 31·38 per cent. of the detected cases, opium being found in only 30·32 per cent. of the cases as against 36 per cent. in the previous year. There was an increase in the number of animal poisoning cases, and here too arsenic was the most popular agent, being found in 73·7 per cent. of the detected cases.

20.—Criminal Justice.

General.

128. The steady decline in the total number of reported offences which has marked the last few years was well maintained. In the year under report 198,832 offences were reported, or about 3,400 less than in 1915. These figures indicate not so much a falling off in crime, though undoubtedly there was a real decrease, as a decline in the number of false and frivolous complaints presented. So-called "true" offences under the Penal Code rose from 88,142 to 88,571, and those under local and special laws from 44,998 to 46,303, while the total number of cases brought to trial under both classes of laws increased from 119,515 to 121,034. It is, however, reassuring to notice that in the four more serious classes of crime—offences affecting life, theft, receiving stolen property, and robbery and dacoity—there was an aggregate decrease of 14 per cent. during the year.

Disposal of cases.

129. Of cases brought to trial, 72 per cent. resulted in conviction or compromise as compared with 73 per cent. in 1915; but there was a rise from 38 to 39 in the percentage of cases in which convictions were obtained. This progressive improvement is satisfactory, though the value of the figures for 1916 is discounted by the fact that it was only in comparatively petty cases under local and special laws that a higher proportion of convictions was secured: in trials under the Penal Code the percentage was only 20. The above figures refer, not to persons, but to cases. Of the total number of *persons* tried for offences under the Penal Code and other laws, some 26 per cent. were convicted or almost exactly the same figure as in the previous year. The number of complaints summarily dismissed decreased from 61,794 to 60,474, while cases in which compensation was awarded to persons falsely accused fell from 870 to 850.

Matrimonial offences.

130. Admitted offences relating to marriage rose from 5,366 to 5,796. Of these, 5,432 were brought to trial and 616 resulted in conviction. The increase in the number of matrimonial offences is regrettable. The serious feature of this class of crime is its intimate connection with the traffic in women that in recent years has been a scandal in certain tracts, while probably in 40 per cent. of the murders committed the originating cause is matrimonial infidelity or irregular sexual relations.

Capital offences.

131. Two hundred and fourteen persons were sentenced to death by Sessions Courts and 227 were dealt with by the Chief Court under Section 374, Code of Criminal Procedure, 148 death sentences being confirmed, 29 commuted, and 50 set aside on appeal.

Special Tribunals.

132. The only case decided in 1916 by Special Tribunals constituted under the Defence of India Act, was that generally known as the first Supplementary Lahore Conspiracy trial. Seventy-four persons were tried, of whom 15 were acquitted, 6 sentenced to death, 45 to transportation for life, and 8 to transportation or imprisonment for a shorter term.

In 51 cases sentences of forfeiture of property were also passed. The Tribunal consisted of two Sessions Judges and an Indian member of the Bar. Under the Act no appeal lies from their decision, but in the exercise of its powers of clemency the Local Government commuted the death sentence in one case to transportation for life. Many of those sentenced to transportation for life were recommended to mercy by the Tribunal and in 27 cases their sentences were reduced to lesser terms. The order requiring forfeiture of property was also remitted in 37 cases.

21.—Prisons.

Admissions and accommodation.

133. The year opened with a jail population of 17,643 which is the largest on record, and though the number of convicts imprisoned fell from 21,972 in the previous year to 20,516 and of newly admitted persons under trial from 26,627 to 22,201, the daily average of persons confined in jails and lock-ups was over 2,000 in excess of the total accommodation provided.

Health.

134. The vital statistics of a year, when malaria was very prevalent, were on the whole satisfactory. The daily average sick-rate fell from 661 to 556, and the mortality from 25·41 to 20·32 *per mille*, a rate which compares favourably with the rate of 30·7 *per mille* among the free population. Particularly satisfactory was the decrease in the number of deaths from pneumonia which can be attributed to the improvement of ventilation consequent on the removal of shutters from doors and windows of sleeping barracks.

Jail Corps for Mesopotamia.

135. The chief feature of the year was the valuable contribution made by the jails towards the national effort in the prosecution of the war. In the summer and autumn volunteers from among the jail population were invited to enlist for service in labour, porter and sweeper corps in Mesopotamia on specified conditions which comprised conditional release from the date of embarkation, pay and allowances and the free issue of suitable kit and rations. The selection of prisoners was limited to those between the ages of 18 and 41, who were found medically fit and who had not been convicted of certain of the more serious offences. The response to this call for volunteers was an eager one, and a sweeper corps consisting of 391 convicts was sent to Mesopotamia in June. This was followed by a porter corps, 872 strong, and a labour corps of 1,179 prisoners in October. All these corps were kept up to strength by subsequent drafts. In addition to the supply of this *personnel*, the manufacture of large numbers of blankets, tents, nose bags and other articles was undertaken in the jails at the request of the Military authorities.

Under-trial prisoners.

136. There was a large decline from 26,627 to 22,201 in the number of under-trial prisoners admitted during the year. In 1915 the numbers were abnormally swollen by the detention, while under trial, of some thousands of persons arrested in connection with the dacoities in the south-west of the province. The relief to the courts implied in this decrease in numbers resulted in lowering the average period of detention of under-trial prisoners from 25 to 23 days.

Discipline.

137. The number of prisoners who escaped from jails was 18 as against 21 in 1915, but of these, 13 as compared with 3 in the previous year, escaped from inside jail walls. On the whole, however, the standard of discipline and conduct was well maintained and in spite of the increase in the average jail population the number of jail offences fell from 24,474 in 1915 to 23,106.

Financial.

138. A fall in the price of food stuffs resulted in a slight decline in expenditure from Rs. 13·78 lakhs to Rs. 13·67 lakhs. The average given cost of each prisoner's guarding and maintenance fell from Rs. 82-12-11 to Rs. 80-11-9. Average earnings however also fell from Rs. 19 to Rs. 15-9-0 and the total profits from jail manufactures decreased by about Rs. 39,000.

22.—Civil Justice.

Institutions.

139. The number of suits instituted in 1916 was 194,864 or 4,300 less than in the previous year. This was to a certain extent due to unfavourable agricultural conditions. Except in the canal-irrigated districts the cultivator had little, if any, surplus with which to discharge his obligations to the money-lender, and the natural result was a substantial decrease in the number of suits by creditors for the recovery of their debts. The magnificent response made by the rural population to the call for recruits also tended to diminish the volume of litigation. With so large a proportion of their manhood absent on active service those remaining on the land had less leisure for resort to the Courts, litigation being generally regarded by the Punjab peasant as a luxury to be enjoyed when work is slack and the purse full.

Value of suits.

140. The value of suits has fallen by nearly Rs. 3 lakhs to Rs. 3,52,04,216. The average value however increased by one rupee to Rs. 179. Excluding land suits, the value of which for jurisdiction is usually far below their true market value, no less than 80,751 or 41 per cent. of the total number of suits instituted did not exceed Rs. 50 in value.

Disposal of work.

141. The decline in the number of institutions was only in the simplest class of cases,—those for the recovery of money or moveable property. Suits of greater complexity and value slightly increased in number. The number of original suits decided was 209,064 or only some 650 less than in the previous year, and the number left pending at the end of the year was reduced from 34,835 to 33,798. The average duration, 78 days for contested and 38 for uncontested original suits, was almost exactly the same as in 1915. The average duration of contested civil appeals in District Judges' Courts fell from 164 to 152 days.

The Chief Court.

142. There was a further increase in the amount of civil work coming before the Chief Court. Institutions rose from 2,977 to 3,039 and disposals from 2,814 to 3,016. The number of first appeals pending has risen from 535 to 568, while the figure for second appeals pending is almost exactly the same as for last year.

Execution of decrees.

143. The number of applications for execution of decrees rose from 191,117 to 204,423; but the number of execution proceedings pending fell from 33,299 to 32,582. The percentage of realisations dropped from 26 to 25; but in this connection it has to be remembered that in many of the proceedings classed as infructuous a settlement is undoubtedly effected privately, but not certified to the Court.

Pre-emption.

144. The decline in pre-emption suits was substantial, the total number instituted being only 4,065, or 1,500 less than in 1910.

Insolvency.

145. Work under the Provincial Insolvency Act, 1907, continued to increase, the number of petitions filed being 2,239 as compared with 1,718 in 1915, and 1,325 in 1914. A separate report on the liquidation of companies has been received and is under the consideration of Government.

23.—Registration.

General state of business.

146. The most noticeable feature of the triennial report for the years 1914, 1915 and 1916 was the increase of 11 per cent. in the number and 16 per cent. in the value of compulsory registrations of immoveable property as compared with the figures of the previous triennium. In 1911 the number of sales registered was a little over 25,000: in 1916 the number was nearly 30,000 and the value of the property sold reached the unprecedented figure of Rs. 314 lakhs. The average price paid on each transaction registered during the triennium was Rs. 1,050 as compared with Rs. 1,017 in the previous three years. Mortgages compulsorily registered show a similar increase of 12 per cent. in number and 17½ per cent. in value during the three years.

PROTECTION.

147. The chief causes of the increase are the growth of capital available for investment and the consequent rise in the value of land, which has made it compulsory to register sale deeds affecting even small plots. The amount of land available for sale has also increased since 1912 when proprietary rights began to be acquired by settlers in the great canal colonies. The shock to credit given by the bank failures in 1913 has made investment in land more popular than ever. It is also reported from different parts of the province that the wealthier trading classes are showing a tendency to flock into towns presumably for the sake of the greater security and amenities there available. The growing desire of the richer town dwellers for comfortable houses on the outskirts of towns and the gradual extension of industrial enterprise led to many sales of building sites in the suburbs of large cities. The increasing popularity of immoveable property as a field for investment shows how little the material prosperity of the Province has been affected by the war and is a remarkable proof of the general confidence in the stability of existing institutions.

148. Optional registrations continued to decline in numbers, partly owing to the general rise in the value of land and partly also owing to the growing tendency to rely on the land records as evidence of a transaction, a satisfactory tribute to the greater reliability of the recording agency.

Land Alienation Act.

149. It is generally reported that the Punjab Alienation of Land Act is understood by the people and by the registering officers, but in certain districts instances of evasion of the Act by means of mortgages disguised as leases were noticed. Special attention has been paid to this form of evasion during the inspection of offices and it can be said with confidence that very few attempts escaped detection. Many districts report cases of refusal to register because of various breaches of the Act.

Income and expenditure.

150. The income of the department in 1916 was Rs. 3,66,870 and its expenditure Rs. 1,41,544. The total income during the triennium was greater than that of the previous one by Rs. 96,728 or 10 per cent. Registration fees increase automatically with the volume of business and the value of the property affected. The total expenditure during the triennium increased by Rs. 19,678 or 5 per cent. The main item in the increased expenditure is the rise in commission paid to Sub-Registrars: this follows automatically on the increase in business.

23-A.—Legal Affairs of Government in the year 1916.

151. The number of references for opinion disposed of by the Legal Remembrancer was 1,041 as compared with 952 in 1915 and 1,146 in 1914.

152. The Secretary of State was plaintiff in 11 original civil suits during the year. Of these suits, 6 were decided in favour of Government while 5 remained pending at the end of the year. Of the cases decided in Government's favour, three were for possession of land and three for recovery of money, the total amount involved being Rs. 29,580-1-1.

153. The Secretary of State was defendant in 77 original actions, including four land acquisition references, of which two were compromised, one withdrawn and one decided, the Collector's award being upheld. The amount involved was only Rs. 2,291-9-4 as against over Rs. 15 lakhs in the previous year. Of the other 73 civil suits, 28 were decided in favour of and 7 against Government, while 38 remained pending at the close of the year. The total amount involved was Rs. 5,35,029. The amount claimed in the decided cases was Rs. 2,18,883 but only Rs. 2,037 was decreed against Government and Rs. 3,457 was awarded to Government on account of costs in cases which were successfully defended.

154. The Secretary of State was appellant in 16 and respondent in 38 appeals. Of these, 18 were decided in favour of and 3 against Government, the rest remaining pending at the end of the year. Two revenue suits were instituted on behalf of the Secretary of State and were decided in favour of Government. Five revenue suits were brought against the Secretary of State and decided against Government, but five appeals filed on his behalf were successful.

155. The appointment of a Public Prosecutor in the Chief Court was sanctioned during the year and the experiment proved a success. He conducted 242 cases, thus relieving the Government Advocate for the conduct of important conspiracy trials. Government Law Officers appeared in one original criminal trial in the Chief Court, which was decided in favour of the Crown, and in 22 original trials in Subordinate Courts. Of these, 5 were withdrawn, 9 decided in favour of the Crown, while 8 remained pending. Out of 1,340 criminal appeals in the Chief Court 873 were decided in favour of and 233 against the Crown. In Subordinate Courts 2 appeals were successfully preferred. The Crown was also successful in 230 out of 340 applications for revision, 97 being decided against it. There were only two miscellaneous cases and both were decided in favour of the Crown.

24.—District and Local Boards.

156. The only change in the constitution of district boards during the year has been the abolition of local boards in Amritsar and the reconstitution of the board with new electoral circles. The system of election of members by votes has not been extended, and it is idle to disguise the fact that it is alien to the rural mind and that attempts to excite interest in rural elections have usually ended in failure. The rural masses however often show themselves capable of selecting the right men, but this is done in India—as it was done in the earlier stages of local self-government in Europe—as the result of popular discussion and by popular acclamation rather than by the foreign and novel machinery of the voting register and the ballot box. At present an apathetic attitude on the part of electors is frequently due not only to the absence of any genuine interest—apart from some artificial stimulus—in the elective system, but also to a recognition of the fitness of the local representative, and the absence of any suitable man to replace him. A more regrettable feature is the absence of any candidate for several vacancies, which had therefore to be left unfilled or filled by nomination. On the whole therefore the rural attitude towards elections is still one of diffidence or distrust, and the whole question of the introduction of the elective system will probably soon come under review in connection with the policy of extending local self-government.

157. The general working of the boards however continues to be good. It has been noticed that where the field of discussion is limited to the mental horizon of the members or a definite task is set which falls within the range of their experience, they generally take an interest in the administration of local affairs, and within these limitations progress is real and promising. The surest line of advance on present conditions is therefore for the boards to gauge the aptitude of their members and utilize them accordingly, and measures recently taken to secure devolution by the removal of financial restrictions and to increase the resources of the boards will also, it is hoped, increase the interest taken in the wider questions of rural administration. Hitherto the general policy in relation to the various operations of the boards has depended mainly on official suggestion, and this in turn has been largely determined by financial considerations. The resources of a number of boards have been so limited and inelastic that nothing more than a hand-to-mouth policy has been possible, and where grants have been received from Government they have been earmarked for special purposes. In such circum-

stances any very lively interest on the part of members could hardly be expected, and they have generally been content to pass a budget prepared in office without any serious comment.

158. It is satisfactory to note that in spite of the unpopularity of additional taxation for progressive measures several boards have raised the local rate to the statutory limit of 10 pies per rupee on the annual value (which by comparison with any other country possessing local self-government is extraordinarily low) and the additional income should be of the greatest value from the point of view of general development.

159. The system under which Government made a number of grants for specific purposes has been entirely discontinued, apart from educational grants, with effect from the year 1917-18, and consolidated grants amounting to Rs. 7,74,000 have been introduced, while an additional development grant of Rs. 2,60,000 has been placed at the disposal of Commissioners. This reform should not only provide a welcome elasticity in local finance and encourage a keener interest on the part of members, but also by introducing a more equitable basis of distribution materially assist the weaker boards. Budgets should now be characterized by a greater variety and show signs of a systematic financial policy.

160. The gross income of district boards was Rs. 78¾ lakhs, 25 lakhs above the figure for 1911-12 and 3¾ lakhs more than last year, nearly half the income being produced by the local rate. Expenditure fell from about Rs. 84 lakhs to Rs. 76¼ lakhs, the main reason being the difficulty of carrying out civil works on account of the War and the consequent scarcity of materials. The expenditure, however, rose by Rs. 22½ lakhs as compared with the figures for 1911-12.

161. Receipts for education increased to about 16 lakhs as compared with about 14¾ lakhs realised last year. Expenditure also rose—from about 23 lakhs to a little over 24 lakhs; the net expenditure was nearly a lakh more than last year. The opening of training schools for women teachers at Ludhiana and at Bohar in the Rohtak District is encouraging and Government is providing for a further extension in the coming year. Hitherto extension of primary education has often been spasmodic and the absence of any definite plan of campaign has militated against its success. This defect is now fully recognised and educational authorities are taking systematic measures to advise and promote a regular and considered policy in the location of schools.

162. Income under the head "Medical" rose from Rs. 97,142 to Rs. 1,07,510; this is particularly gratifying as Government grants fell considerably. The levy of fees from the well-to-do continues to be unpopular with the public and the medical staff. Expenditure decreased by a little over Rs. 7,000 to Rs 7,84,047 owing principally to a large and welcome reduction in plague charges. The expenditure of a number of boards under this head still appears to be inadequate. It is hoped to stimulate their efforts by providing a lakh of rupees as grants-in-aid for the construction of new buildings in the coming year. The expenditure on hospitals rose from Rs. 4,31,772 to Rs. 4,83,497 and this fact indicates that boards have faced willingly the rise in the price of medical requisites.

163. The improvement of agriculture is now receiving practical interest and support from several boards. Demonstration farms have been started at Sialkot and Amritsar and are contemplated at a number of other places; but their success at present must depend largely on the skilled assistance which the Agricultural Department can furnish and the movement, therefore, should not be allowed to outstrip the supply of competent managers. A number of bulls were purchased during the year and the Hissar Farm is scarcely able to meet the calls made upon it.

164. Income under the head 'Civil Works' fell by a lakh of rupees owing to the reduction in Government grants. Expenditure also decreased by Rs. 8¼ lakhs. There is a general complaint of the difficulty of procuring stone metal owing to the shortage of railway trucks and the withdrawal of concession rates, and if these conditions persist the expenditure on roads will have to be very heavy as soon as the present restrictions are removed.

25.—Municipal Administration.

165. No change occurred in the number of municipalities during the year 1916-17, but notified areas were constituted at Bághbánpura and Bhogíwál, Ichhra and Samundri. The extension of the elective system to several municipalities, where it has not hitherto been adopted, is under consideration and the system will be introduced wherever it has a reasonable prospect of success. The reports as to elections are hardly encouraging and leave the impression that in many towns the system is either regarded with indifference or, in the case of keen contests, which are generally stimulated by personal or sectarian feeling rather than by broader issues of principle and policy, is apt to result in bribery and corruption. Popular opinion as regards elections still leaves much to be desired, but now that the system of representation by election is assuming more importance it is more than ever necessary that every effort should be made to correct and improve it. It is hoped that some improvement may be effected by the rules and model bye-laws recently issued by Government and possibly more by raising the qualifications of voters. But the ultimate success of the elective system must depend primarily on a healthy public opinion and secondly on the character of the candidates and their agents, and their determination to refrain from the reprehensible methods that are now only too common.

166. The attitude of members towards municipal questions in many cases still leaves room for improvement. In large towns, however, where the standard of education is higher and knowledge of outside conditions greater, members are gradually acquiring that appreciation of public duty without which urban self-government is impossible. In the case of small towns the position is different, as local and sectarian jealousies are rampant and are a serious impediment to clean and efficient administration. It has been noticed in the ordinary headquarters municipalities that members are willing to subordinate personal and party interests to the good of the public only when the former are not deeply engaged and the latter is clearly apparent.

167. On the whole committees are discharging their statutory functions satisfactorily. There appear, however, to be two tendencies which require to be checked: a desire on the part of unofficial members to keep executive control of petty matters in their own hands, and a disinclination to grapple with really important problems. The former is seen in the disproportionate interest they take in individual building applications and other petty questions of a personal nature and often results in that jealousy of the executive officers of the committee which was the subject of unfavourable comment in last year's report. Progress would be greatly accelerated if a small portion of the time and attention which is now given to these petty matters were devoted to the consideration of broader questions.

168. The total income of municipalities rose from Rs. 74¾ lakhs to Rs. 82 lakhs and thus almost reached the figure of 1914-15. Omitting Government grants (Rs. 7⅓ lakhs this year) the increase in the quinquennium has been one of 10 per cent. The aggregate expenditure for the year (Rs. 70½ lakhs) was practically the same as for 1915-16, and the total balance at the close of the year rose from Rs. 36 lakhs to Rs. 40 lakhs. A number of large schemes of public improvement are in hand or under consideration. Though few, if any, of the larger schemes can be undertaken by municipalities without grants from Government, it is a gratifying sign that committees realize the need for better conditions,

particularly as regards sanitation and are ready to take practical steps to attain them. A number of municipalities ended the year with what appear at first sight to be unnecessarily large balances but in almost every case these represent the funds needed to finance some scheme in contemplation.

TAXATION.

169. Income from taxation during the year (Rs. 45 lakhs) was two lakhs greater than last year; octroi accounts for a lakh-and-a-quarter of this excess and its total of nearly 40 lakhs constitutes a record. The proposals regarding the substitution of a terminal tax at Gujránwála have now been submitted to the Local Government and a similar reform is before the municipal committee of Ludhiána. This form of taxation has attracted the attention it deserves, and is said to be under contemplation in Jullundur, Jagráon, Hissar, Bhiwáni, Rewári, Palwal, Rohtak, Karnál, Ambála City, Lahore and Amritsar. Legislation empowering the Local Government to sanction in certain cases proposals to substitute a terminal tax for octroi is now under consideration and if passed will facilitate the more general adoption of this tax. The incidence of taxation for the year was Rs. 2-12-6 per head.

26.—Military (Volunteers).

170. There were one mounted and three dismounted Volunteer Units in the Province, namely the Punjab Light Horse, the Punjab Volunteer Rifles, the Simla Volunteer Rifles and the 1st Battalion, the North-Western Railway Volunteer Rifles, the ranks of which though depleted to some extent by calls made upon them by the military authorities, were nevertheless up to the average strength in consequence of many non-volunteers having enrolled since the outbreak of the war. All were inspected at various times during the training season of 1916-17 and were reported on as quite efficient. They however ceased to be units of the Volunteer Force in February 1917 when the Indian Defence Force Act was passed and thenceforth became units of that Force and were divided into Active and Reserve Companies. They retained their former designations under the new Act with the omission of the word "Volunteer."

171. During the year under review these units continued to afford the military authorities all the assistance they were capable of and between them contributed 56 additional members to the Indian Army Reserve of Officers and 16 to the commissioned ranks of the Regular Army. One Corps alone, the Punjab Light Horse, has no less than 95 of its members serving in the Indian Army Reserve of Officers, whilst the Punjab Volunteer Rifles at the beginning of 1917 had in actual military employ as many as 264 members, the majority of whom were on service abroad.

172. The North-Western Railway Volunteer Rifles also afforded considerable assistance and have furnished large numbers for service on railways in Mesopotamia, East Africa and elsewhere, as also reinforcements for the Maxim Gun Section sent to East Africa.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the Operations of the Department of Agriculture, Punjab, for the year ending June 30th, 1917.
(2) Annual Report of the Punjab Veterinary College, Civil Veterinary Department, Punjab, and the Government Cattle Farm, Hissar, for the year 1916-17.
(3) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1916.
(4) Report on the working of Co-operative Societies for the year ending 31st July 1917.

Fisheries.—Report on the Department of Fisheries, Punjab, for the period 1st June 1916 to 31st May 1917.

Weather and Crops.—(1) Report on the Weather of the Punjab for the year 1916-17.
(2) Punjab Seasons and Crop Report for 1916-17.

Horticulture.—Report on the Lawrence Gardens, Lahore, for the year 1916-17.

Forests.—(1) Progress Report on Forest Administration in the Punjab for 1916-17.
(2) Progress Report on Arboriculture in the Punjab for the triennial period 1914-15 to 1916-17.
(3) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1916-17.
(4) Land Revenue Report, as above.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1916.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the year 1916-17.
(2) Report on the External Land Trade of the Punjab for the year 1916-17.
(3) Report on the Joint Stock Companies in the Punjab for the year 1916-17.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1916-17.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1916-17.
(2) Land Revenue Report, as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—Statistical Abstract for British India, Volume I, Commercial Statistics.

Forests.—Statistical Abstracts for British India, Volume II, Financial Statistics.

Crops.—(1) Agricultural Statistics of India, Volume I, Tables II and III.
(2) Estimate of Area and Yield of certain principal Crops in India.
(3) Prices and Wages in India.
(4 Variations in Indian Price Levels.

Mines and Quarries.—(1) Statistical Abstracts for British India, Volume I, Commercial Statistics.
(2) Records of the Geological Survey of India, Volume XLVII, Part 3.
(3) Report of the Chief Inspector of Mines in India.

Manufactures.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

Trade.—(1) Inland Trade (Rail and River borne) of India.
(2) Statistical Abstracts for British India, Volume I, Commercial Statistics.

Railways.—Administration Report on Railways in India for the calendar year 1916-17.

Irrigation.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

27.—Agriculture.

SCIENTIFIC.

General.

173. The most important change in the staff of the Agricultural Department that occurred during the year was the transfer of Mr. Barnes, Principal of the Agricultural College and Agricultural Chemist, to Pusa as Imperial Agricultural Chemist, where he died shortly after his arrival. The province and the college owe a great deal to his energy and ability. He was succeeded as Principal by Mr. Roberts, Professor of Agriculture, and as Agricultural Chemist by Mr. B. H. Wilsdon from the Government College, Lahore.

Lyallpur College.

174. There were in July 1916, 200 applicants for admission to the four years' course at the Agricultural College, but only 38 vacancies. The usual one month's English course for Revenue and Irrigation Officers, and the six months' vernacular course were also held, 20 students attending the former class and 30 the latter. The candidates for admission to all these classes, especially the last, were much more numerous than the vacancies, and the opening of a vernacular class at the Gurdáspur farm is contemplated. Many district boards and some private donors presented scholarships for both English and Vernacular classes. The affiliation of the college to the Punjab University has been decided on.

175. The increasing popularity of the college can be attributed to two main reasons. The first is that the college can now lead to an honourable and well paid career in Government service : the second is that the land owning classes realise that a training at the college will render their sons more fit to manage their estates, and that the possibilities of improved agricultural methods in the Punjab are not small. Among the students at the college is a son of a member of the Imperial Legislative Council, who will manage his estate on leaving the college. The number of applications from private employers, both English and Indian, for men to manage their estates who have passed through the college, is daily increasing.

Experiments and research.

176. Valuable work in chemical research continues to be done. The Narwala *reh* reclamation experiment was successfully concluded during the year, and the land restored, cured, to its original owners. The reclamation took about three years, and cost about Rs. 30 per acre *plus* an undetermined charge for extra water. The value of the land treated has been increased from Rs. 45 to at least Rs. 250 per acre. A proposal to apply the methods that proved successful at Narwala, on a considerably larger scale to *kallar* lands in the new Lower Bari Doab Colony, is under consideration.

177. Some of the Economic Botanist's wheats and cottons are very promising, and may eventually supplant 4-F American cotton and Punjab 11 and Pusa 12 wheats, which the Department is at present pushing in the Province. The Scotch potatoes in the Simla hills continue to be extremely popular and successful ; they generally yielded from 50 to 75 per cent. more than country potatoes in the same neighbourhood. Results of experiments with artificial manures so far show that no such manure can be used profitably in the Province.

Implements and demonstration work.

178. Despite the continued rise in prices and the difficulty of obtaining materials on account of the war, the sale of improved agricultural implements of all kinds in the province during the year showed an increase of about 40 per cent. over the number sold during 1915-16. By far the greater part of the implements sold was ploughs. The Professor of Agriculture is working at two types of improved iron ploughs which he considers will be more suitable for Punjab conditions than any of the existing ploughs. To enable zamindars to harrow their crops, especially wheat, and also to sow their crops in lines, simple bar harrows and drills, made almost entirely of wood, which are very much cheaper than the imported article and only slightly inferior in efficiency, are now being made and sold at the Lyallpur farm.

179. Demonstrations of improved implements and cultural methods were given at some 20 fairs. More useful than these were demonstrations given by the department's men in ordinary zamindars' land with their own bullocks. During the year the Gujrát district board started an agricultural demonstration farm on the lines of that in Siálkot, and several other district boards are meditating similar enterprises. All these farms are managed by officers of the Agricultural Department.

Well boring.

180. The well boring staff continued to do excellent work, and increased the supply of water in 538 wells, as compared with 346 in the previous year. Six tube well installations were also put down. This branch of work was, however, considerably handicapped by the great rise in the price of materials on account of the war.

STORAGE AND DISTRIBUTION OF SEED.

Cotton.

181. The area under the well-known American cotton 4-F increased from 50,000 to 215,000 acres during the year, and is now more than 27 times what it was two years ago. An additional income of between 40 and 50 lakhs of rupees should accrue to the growers of this cotton this year in the Province as a whole, owing to the premium it fetches compared with country cotton. Over 50,000 maunds of 4-F cotton were sold by auction last winter in the Lower Chenab, Lower Bari Doab and Lower Jhelum Colonies. The object of these sales, which the Department organises, is to ensure the growers getting as nearly as possible a fair price for their cotton. This object was generally attained. At some of the auctions in the new Lower Bari Doab Colony, the sellers of the purest cotton obtained Rs. 17 per maund, though before the sales they had been getting only Rs. 11 or Rs. 12. Steps are being taken to post Bombay and Lyallpur cotton prices for general information at the more important cotton markets of the province. There is much demand for 4-F seed, and the Department controls and provides as much seed as possible. It provided about 13,200 maunds of 4-F seed in the Lower Chenab, Lower Bari Doab and Lower Jhelum Colonies in the spring of 1917.

Wheat.

182. The wheat known as Punjab 11 is being pushed in the canal colonies. It is a heavier yielder than the mixture it supplanted, and this is the principal reason for its popularity: being pure, it also nearly always fetches a slightly higher price in the market than ordinary wheats. The area under this wheat last rabi in the Lower Chenab, Lower Bari Doab and Lower Jhelum Colonies was 97,000 acres against 27,000 acres in 1915-16. It is estimated that an additional income of at least 2 lakhs of rupees accrued to the Punjab zamindars who grew this wheat. For next season the Department has expended over a lakh of rupees on the purchase of wheat for sale for seed this autumn. In addition to this, very large amounts have been separately stored by large growers and by some co-operative banks for sowing purposes next season.

183. Pusa 12 wheat is very popular in the Hoshiárpur, Jullundur, Gurdáspur and Siálkot Districts particularly on well lands. It is also being grown in the Ferozepore, Karnál, Hissar and Rohtak Districts. The area under it, last rabi, in these districts was about 10,000 acres, and increasing amounts are being stored for next season by growers. It gives an increased outturn of at least 25 per cent. and a premium of 2 annas per maund. It is also very popular for eating purposes.

Sericulture.

184. Seven hundred ounces of silkworm seed were distributed, as against 575 ounces last year, in the Siálkot, Ambála, Hoshiárpur and Gurdáspur Districts, the last taking 578 ounces. The total produce of dry cocoons (95 maunds from 578 ounces of seed) was sold for Rs. 9,074. The Salvation Army Silk School at Simla is doing fairly well, and has at present 20 students.

Date palms.

185. A monograph on date palms by the Economic Botanist is in the press. The Arabian dates continue to do very well and are very popular, though the crop suffered much, as did country dates, from the unusually heavy monsoon.

PRODUCTION AND DISTRIBUTION.

Co-operative Societies.

General.

186. The year has been one of great activity, but consolidation and education have been aimed at rather than expansion. A second officer of the Indian Civil Service was placed on special duty in January and the number of Government Inspectors was raised to nineteen. At the same time, the Sub-Inspectors formerly paid by Government were discharged and re-employed by societies. With the increased staff it became possible to subject all societies to a thorough over-hauling, with the result that while many defects came to light, a great improvement in the general condition was effected. About 12,000 members who had ceased to take any interest in the movement or were found to be unsuitable were expelled, while 13,000 cases of overdue loans were referred to arbitration. At the same time an effort was made to impart a better understanding of the duties and responsibilities attaching to membership, with the result that over Rs. 52 lakhs were collected on account of shares, principal and interest. The autumn harvest had been somewhat damaged by excessive rain and the spring harvest on dry lands was disappointing, while Government's claim for arrears of land revenue and *takkavi* had to be met; but for these factors the sum recovered would have been much larger.

Central Banks and Unions.

187. Two Central Banks were closed and two new banks were registered. The campaign in support of the war loan led to heavy withdrawals, the Jullundur Bank alone paying out Rs. 1·3 lakhs, but re-payments by societies were unusually good, and there was never any difficulty in meeting the applications of depositors or the demands for fresh loans. Central Banks added Rs. 88,000 to their paid-up share capital and Rs. 58,000 to their reserve funds, and earned Rs. 1·34 lakhs. Their financial position is thus being steadily strengthened.

188. Most of the Unions were re-organised. Each affiliated society is to have one share only and on this no dividend will be paid; all profits will be placed to reserve so as to provide investments as security for the cash credits with the Bank of Bengal, thus relieving the existing public-spirited guarantors of the burden which they have so generously borne. The Unions increased their reserve funds by Rs. 14,500 and earned Rs. 18,540. These central financing institutions now own nearly Rs. 13 lakhs of capital against deposits of Rs. 33·7 lakhs. The work of affiliating agricultural societies to Central Banks or Unions is making rapid progress and 2,532 now own shares in their financing institutions as compared with 1,485 last year. Individual members are still in a majority in fourteen Central Banks, but it is hoped that the voting power will gradually pass in all cases into the hands of co-operators.

189. The effort to create a sound system of rural finance has been facilitated during the year by the grant of several valuable concessions, the most important of which is the approval of a scheme whereby the Provincial finances bear the cost of three-quarters of the commission paid on money-orders despatched from one society to another. The effect desired is to make money more fluid. The Punjab, like other Indian provinces, lacks the banking system which plays so important a part in the financial life of more advanced countries and facilities for the cheap transmission of money are in consequence wanting. The Indian postal money-order system aims at uniformity of charge and the commission is the same for remittances between neighbouring villages as between a village and England or Burma. The result is that the rate presses heavily on regular transactions in a small area, and the new concession will enable village societies to deal with their Central Banks almost as easily as commercial firms deal with their banks in the same town.

190. New rules were sanctioned by the Local Government, the important innovations being that primary societies may pay a cash dividend of not more than ten per cent in their twelfth and following years and that

the awards of arbitrators shall be enforced by a civil court as a decree of that court. The Government of India remitted the stamp duty chargeable on awards of arbitrators.

Agricultural Societies.

191. The number of agricultural societies rose by 102 to 3,417. The total share capital increased by Rs. 4¼ lakhs and now stands at Rs. 46,88,000; the reserve funds total Rs. 27,00,000 and a sum of Rs. 8,34,000 was earned during the year. The capital owned by these societies is thus over Rs. 82 lakhs and forms 58 per cent. of their working capital; while they hold Rs. 11 lakhs in deposits from non-members and nearly Rs. 42 lakhs on loan from Central Banks. Thus the members are rapidly becoming less dependent upon outside aid. As old debts are gradually paid off, the need for money tends to decline. The amount required to finance the agricultural operations of the average small peasant proprietor is very small, varying from fifty rupees in a dry district and eighty rupees in a district irrigated by wells to one hundred and fifty rupees in a rich canal-irrigated tract. Over Rs. 31,58,000 were advanced during the year. More than half of this sum was for strictly productive purposes and a little less than thirty per cent. was for re-payment of old debts. Re-payments of principal totalled Rs. 33·4 lakhs, over Rs. 8 lakhs more than last year, representing nearly 26 per cent. of the amount on loan at the beginning of the year.

Non-Agricultural Societies.

192. Industrial societies have continued to suffer from the war, but good work is being done and with the restoration of normal conditions more progress may be hoped for. The Simla Clerks Societies are working well. A new large society has been registered for the North-Western Railway employees.

Miscellaneous.

193. The work of weeding out and liquidating bad and hopeless societies is being slowly proceeded with. Applications by several hundred members for insolvency threatened at one time to give trouble, but the staff in most cases was able to secure the interests of the societies concerned.

Veterinary and Live-stock.

The Punjab Veterinary College and Hospital.

194. The staff of the Punjab Veterinary College remained under strength during the year and the Principal had to undertake the duties of Professor of Sanitary Science in addition to his own. Eighty-five new students, of whom 32 belonged to the Province, were admitted as against 70 in the previous year, and altogether there were 203 students who presented themselves in the various annual examinations as compared with 189 in 1916. The percentage of passes was not quite so good as in the previous year, but the standard of examination has been raised and the results obtained were very creditable to the staff of the College. Owing to the heavy demand for the services of trained veterinary officers throughout India, only two students attended the post-graduate class. In addition to ordinary teaching work 38 transport dressers and 50 farriers were trained in response to a demand of the military authorities. There was a considerable increase, from 1,121 to 1,603, in the number of in-patients treated in the hospital attached to the College, but the number of out-patients again fell off.

The Civil Veterinary Department.

195 There were many outbreaks of contagious disease during the year, and the Civil Veterinary Department with its depleted staff had a hard task to cope with them. Altogether there were 30,804 deaths from contagious diseases reported, as compared with 20,903 in the previous year. Of equine diseases surra was particularly prevalent and there was a severe outbreak of dourine in the Dera Ghazi Khan District. The Dourine Act was extended to this district and every effort was made to check the spread of the disease, but it has since been found necessary to extend the Act to the whole province. Among bovines rinderpest and hæmorrhagic septicæmia were responsible for 25,750 deaths as compared with 9,429 in the previous year. All that was possible with the shortage of staff was done to check these epidemics and the number of animals inoculated and vaccinated against both diseases was substantially larger than in 1915-16.

PRODUCTION AND DISTRIBUTION. Hospitals.

196. A new hospital was constructed at Patti in the Lahore District at the expense of a resident, and additions were made to a number of existing hospitals by private contributions.

GOVERNMENT CATTLE FARM, HISSAR.

197. The year was on the whole a prosperous one for the Hissar Farm. Receipts rose from Rs. 1,01,000 to Rs. 1,25,000, while expenditure fell from Rs. 1,85,000 to Rs. 1,55,000 mainly in consequence of improved fodder conditions. Though hæmorrhagic septicæmia accounted for 18 deaths among the stock, casualties on the whole amounted to only 372 as compared with 489 in the previous year. Stall feeding of the cattle had to be resorted to in the opening months of the year, but the excellent monsoon rains relieved the situation, and by the end of the year a reserve stock of 70,000 maunds of fodder had been collected. The record number of 201 bulls was issued to district boards and 41 three-quarter-bred merino rams were also distributed. An interesting experiment in the breeding of Arab stallions has been started on the farm, and it is hoped in this way to make the province self-supporting as regards the provisions of such stallions for local bodies.

CAMEL SPECIALIST.

198. The work of the Camel Specialist proceeded on the same lines as before. He reported that his special treatment for cases of surra was instrumental in saving 258 camels out of 343 treated. Since the close of the year this department has been taken over by the military authorities.

27-A.—Fisheries.

199. Rules were drafted for the districts of Hoshiárpur, Jullundur, Ludhiána and Amritsar (for the Beas watershed only), and were submitted to Government for approval. Rules were also framed for the Kapúrthala State at the request of the Maharaja and are under the consideration of the Darbar. The regulations have now been enforced in Kángra and a portion of the Hoshiárpur District for over a year and are, on the whole, working satisfactorily.

200. The Chhenáwán and Sirkián murral ponds were abandoned as such, and arrangements were made for a smaller tank in which experiments and results can be watched more closely and carried out more satisfactorily. The trout operations in Kulu were very successful, and the percentage of casualties in nurseries was considerably less than in former years. Ova and fry were also planted out in the Mandi and Chamba States. The only nurseries that proved a failure were those in Chamba and they will be overhauled with the Raja's permission. Several angling licenses were issued in Kulu and the sport obtained augurs well for the future.

28.—Weather and Crops.

Character of the seasons.

201. In the beginning of 1916 the spring rainfall was too slight to leave any moisture in the ground for kharif sowings, the recorded amount being only 40 per cent. of the normal. Except for a short disturbance of the cold weather type the month of March was dry, and in April and May rainfall was greatly in defect, but in June it was fairly heavy in the montane and sub-montane tract and light or moderate elsewhere. This helped cotton sowings considerably. The monsoon burst in the Punjab in the latter half of July, when heavy and widespread rain was received throughout the province, except in a few of the south-eastern and south-western districts. It was unusually active in August and, although widespread rain fell only on a few days in the month, local falls were of frequent occurrence, and were in some places very heavy. These greatly benefited the standing cotton and sugarcane crops. Fairly heavy rain was received in the first week of September, but during the rest of the month the monsoon was weak, except in the south-east, and it failed

213. A revised working plan for the Chánga Mánga plantation was completed and sanctioned, while the revision of the working plans for Kángra and Kulu was continued, and considerable progress made. A revised plan was approved and printed for Dhami State, and a working plan for the Jubbal State chil forests was sanctioned. The revised plans for the Shahdara forest, the Dharmsála Municipal forests and the Pangi forests in Chamba, are still under preparation. Browsing schemes for the 50th and 51st Silladar Camel Corps were sanctioned, and that for the 52nd was completed. The schemes for the 57th, 53rd and 54th are still in course of preparation. All the above schemes will be held in abeyance pending the return of the Corps from field service. **Working plans.**

214. The total number of forest offences reported was 9,357, a decrease of 1,155 as compared with last year. The decrease of 137 fire cases is mainly due to the wet spring of 1917 favouring fire protection. The decrease of 1,869 cases under unauthorised fellings and 187 under grazing chiefly occurred in Jhelum, Multán and Ráwalpindi, and is attributed partly to the fact that the abundance of grass outside the forests, which resulted from a good monsoon, decreased the temptation to lop for fodder, and also to the fact that free grazing concessions were allowed in most of the Ráwalpindi forests. Considerable loss was caused in Ráwalpindi by the wanton breaking of the resin collecting pots affixed to trees. The number of fires was 160 affecting 4,000 acres as compared with 319 fires affecting 18,511 acres last year: the reason for the decrease has been given above. **Protection.**

215. The deodar seed crop was much below the average, and a large proportion of the seed was destroyed by insects while still on the trees. Little spruce and silver fir seed was produced but kail seeded profusely and chil gave an average crop. Seedling regeneration suffered severely in consequence of the drought during 1915 and the spring of 1916. It is now realized that the absence of deodar regeneration must be attributed not so much to adverse climatic conditions as to the adoption of an unsuitable system of regeneration. The same remarks apply to silver fir and spruce, whilst in the case of kail and chil regeneration is generally profuse wherever fires and excessive grazing do not take place. **Natural and artificial reproduction.**

216. The total area worked over under the different systems of management was 61,150 acres as compared with 89,784 acres last year. This large decrease was chiefly caused by the gradual completion of clearing areas about to come under colonization. The departmental outturn of timber shows a small decrease from last year's figures, owing chiefly to a smaller area having been felled in Chánga Mánga under a revision of the working plan; while minor produce shows a considerable decrease in value owing to the fact that the outturn of crude resin has been taken at cost price instead of at sale price. The decrease in timber removed by purchasers occurred in Bashahr, Kulu and Ráwalpindi, and was due in the case of Bashahr to the fact that the outturn of 3 years' prescription in the Pabar forests was included in last year's returns. In Kulu fewer trees were sold to contractors. The total outturn of all classes of produce, as compared with the average outturn of the previous three years, is shown in the following figures:— **Exploitation.**

	Timber.	Firewood.	Minor produce.
	Cubic feet.	Cubic feet solid.	Rs.
1916-17	8,855,000	26,942,000	23,60,699
Average, 1913—16	6,926,000	25,024,000	23,53,120

217. The resin industry has developed rapidly, and the profit on the year's working more than covered the entire cost of the distillery, while the quality of the products has been greatly improved. **Miscellaneous.**

PRODUCTION AND DISTRIBUTION.

No progress took place in the development of the wood pulp industry, and little advance is possible under present financial conditions. The demand for timber remained abnormal; spruce fir and chil, for which hitherto there has been little demand, were in great request, and the military authorities secured 1,035,000 cubic feet of timber mainly through contractors. The Kulu orchards were enlarged and are now a valuable property.

Financial results.

218. The financial results of the work of the department are given in section 43 of Chapter V below. The year's working shows a surplus of Rs. 9,06,625 and a cash surplus of Rs. 7,23,347. The price of all the chief timbers continued to rule high, and the market for resin products was again most favourable, sales of resin and turpentine giving a revenue of Rs. 2,14,000.

31.—Mines and quarries.

Indian Mines Act.

219. The total number of mines worked during the year under report was 34. Of these, four are Government salt mines, 20 coal mines (15 in Jhelum, 2 in Shahpur and 3 in Miánwáli), and 10 are slate mines (3 in Gurgaon, 2 in Gurdáspur and 5 in Kángra). The limestone quarry at Hoshiárpur was closed on account of a rise in the cost of labour. No new prospecting license for coal was given during the year.

220. The total amount of minerals raised and the value as compared with 1915 is given below :—

	Minerals in tons.		Value in Rupees.	
	1916.	1915.	1916.	1915.
Coal	47,448	59,579	3,20,926	3,24,583
Salt	160,356	154,770	4,09,244	3,94,986
Slate	7,315	7,910	1,07,890	1,09,926

221. Except in the case of salt there was a slight decrease in the outturn as compared with 1915. The health of the labourers was good and arrangements for sanitation satisfactory. Wages except in Gurgaon are steadily rising.

Other Minerals.

222. The minerals which do not come under the Indian Mines Act are :—Gold by washing, petroleum, alum shale, block kankar, limestone, gypsum, antimony ore, building stone and sandstone. The outturn and value of these minerals during the year are as follows :—

District.	Mineral recovered.	Value.
		Rs.
Ambála, Attock, Miánwáli and Jhelum	Gold, 186·23 oz.	12,152
Attock	Petroleum, 182,480 gallons	18,248
Miánwáli	Petroleum, 1,334 gallons	208
Do.	Alum shale, 6,821 tons	7,217
Ambála	Block kankar, 1,616 tons	3,112
Jhelum	Limestone, 21,491 tons	16,118
Do.	Gypsum, 615 tons	461
Do.	Antimony ore, 4·11 lbs.	40
Do.	Sandstone, 137,579 tons	1,21,775
Simla	Building stone, 5,714 tons	1,335

altogether to penetrate into the south-western districts. The concluding burst of the monsoon rains occurred between the 2nd and the 6th of October, about a fortnight after the usual time : it was widespread and unusually heavy for the time of the year. Dry weather set in generally during the second week of October and, continuing until about the middle of January 1917, facilitated the picking of cotton and other harvesting operations.

202. The excellent monsoon rainfall followed by heavy rains in the beginning of October was most favourable for the sowing of spring crops. The winter rains, which ordinarily begin about Christmas, appeared on the 14th of January 1917 and were neither so frequent nor so heavy as usual. In the second half of February and March only slight and entirely insufficient showers fell. For the whole period from December 1916 to March 1917 there was a shortage of 75 per cent. and the deficit was general. The season was in fact one of the driest on record. In April and May fairly heavy rain fell at intervals throughout the province, accompanied, as is usual in these months, by hailstorms which did damage in some districts. The April rainfall was harmful in the east and south-east, where much of the wheat had been cut, but benefited greatly the crops of the northern Punjab where harvesting starts at a much later date. After the cessation of the monsoon in October 1916 the supply of water in perennial and inundation canals was sufficient and river floods were high, but later the deficient winter rainfall seriously affected the canal supply.

Sown and cropped areas of the year.

203. The total sown area exceeded the area sown last year and the assumed normal sown area by 22 and 13 per cent., respectively. The total matured area was 42 and 15 per cent., respectively, more than the previous year's matured area and the assumed normal matured area. The harvests of the year, so far as area is concerned, fell little short of those of 1914-15 which constituted a record.

Irrigated areas.

204. The total irrigated area of over 12½ millions acres was 40 per cent. of the total as compared with 47 per cent. in 1915-16. Of this 8,071,588 acres, or 64 per cent., were watered by Government canals and the rest by private canals and from other sources.

Chief staples.

205. The area under wheat advanced from 8,991,542 acres to 9,467,240 acres, an increase of 5 and 10 per cent., respectively, over the previous year's area and the normal. The yield, especially that on the unirrigated areas, was affected by the deficiency of the winter rainfall. The total yield was 2,557,871 tons or 2 per cent. below normal, the yield on irrigated areas being 14 per cent. above, and on unirrigated areas 28 per cent. below this standard.

206. The outturn of the other principal crops as compared with the estimated normal outturn was as follows :—

Name of Crop.	*Outturn in percentage of estimated normal.*
Rice	104
Barley	90
Jowar	61
Bajra	156
Maize	107
Gram	108
Rabi oilseeds	90
Sugarcane	128
Cotton	95

Harvest prices.

207. Prices, though affected by the war, were, except in the case of wheat and cotton, lower than in the preceding year. Owing to the character of the wheat crop and the brisk foreign demand, which led to an increase of 26 per cent. in its export during 1916-17, the average price rose from Rs. 3-5-0 to Rs. 3-10-0 per maund. In spite of the normal outturn, the price of cotton rose from Rs. 6-9-0 to Rs. 8-10-0 per maund owing to the increased demand for exports. The price of rice fell from Rs. 2-14-0 to Rs. 2-7-0 and of rape-seed, of which the export

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demand is small, from Rs. 4-4-0 to Rs. 4-2-0 per maund. The fall from Rs. 5-13-0 to Rs. 5-0-0 in the price of gur was due to the character of the crop.

Trade and stocks

208. Exports of wheat and cotton were heavier than in the previous year and of gram and barley less. Owing to the good harvest imports of rice and sugar were less than in the preceding year. Stocks of food-grains were sufficient in all districts.

29.—Horticulture.

The Lawrence Garden, Lahore.

209. The appearance of the gardens was greatly improved by the removal of the conservatory from the vicinity of the Montgomery Hall, by the formation of a *canna* garden and by the clearing and grassing of the area near the Zoological Gardens. Favourable monsoon rains enabled satisfactory progress to be made with the grassing and planting of the mounds, which from being an eyesore are now becoming one of the most attractive features of the gardens. Financially the year was a satisfactory one for the garden and there was an increase of Rs. 3,500 in the receipts from sales of garden produce; but the improvements effected in recent years involve an increased scale of expenditure and the annual Government grant has been raised by Rs. 3,000.

30.—Forests.

Alteration in areas.

210. The area controlled by the Forest Department was reduced by 584 square miles to 7,211 square miles, the decrease being due chiefly to 566 square miles of unclassed forest in Multán being given up for colonization. The district authorities took over 9,175 acres of Dera Gházi Khan rakhs and 7,247 acres in Núrpur Tahsil, while other small changes were made. The areas which passed out of the control of the Forest Department being almost entirely classed as waste lands, caused little reduction in the areas under forest growth. The area under the department at the end of the year consisted of the following classes :—

	Square miles.
Reserved	1,769
Protected	4,169
Unclassed	909
Leased	364
Total ...	7,211

Forest settlements.

211. Certain complicated questions arising out of the Kángra Forest Settlement were dealt with during the year; but proposals for handing over to the Deputy Commissioner further considerable areas of forests in the Kángra, Dehra and Pálampur Tahsils are still held up pending selection and demarcation of areas to be retained by the Forest Department under a system of rotational closure. Progress has been made in selecting these areas; but it is estimated that the work will not be completed before June 1918.

212. The revision of the settlement of the Sutlej Valley Forests in the Bashahr State was continued and will be completed by the end of the current year. In the lower ranges much included cultivation has been voluntarily given up by zamindars in exchange for portions of forest near their villages and the readjustment of areas will be beneficial both to the villagers and the Forest Department. Boundaries have been thoroughly revised and a record-of-rights prepared. In Montgomery the settlement of areas for the Chíchawatni plantation of 11,680 acres or 18 square miles and of 1 square mile set aside for browsing of Silladar Camel Corps on the line of march has been completed; and 11 square miles are under settlement in the Phália Tahsil of Gujrát District in connection with the proposed reservation of portions of the Dhaffar, Mona, Miána, Gondal North and Musa rakhs for the formation of the Dhaffar irrigated plantation on the Upper Jhelum Canal.

32.—Manufactures.

223. The number of factories subject to control under the Indian Factories Act, 1911, during the year was 184 as against 187 in the previous year, but the number actually working rose from 163 to 170. Inspections were made of 149 factories, 50 of these being inspected twice, 25 three times and 5 more than three times. Many of the ginning factories were kept closed owing to pooling arrangements, though the cotton crop was good and those which were open worked at full pressure. The number of operatives employed—32,000—was a record for the last ten years. This was due to the good cotton crop and to the employment of increased staffs in the railway and canal workshops on munition work and in the Dhariwal Woollen Mills on army clothing orders.

224. The lighting of factories was much improved during the year, and the provision of means of escape from fire received considerable attention. Satisfactory progress has been made in obtaining the adequate ventilation of nontextile factories, but the problem of ventilating spinning mills presents difficulties which it is hoped to overcome by an amendment of the rules. These improvements in the conditions of labour in factories are however counterbalanced by the marked indifference shown by Indian employers to the well-being of their operatives,—an indifference which is evidenced by the refusal to allow proper rest intervals, the deliberate disregard of the weekly holiday, the sweating of women and children and the squalid and insanitary nature of the housing accommodation provided.

225. The number of fatal accidents increased from 6 in the previous year to 11, but there was a slight decrease in the total number of accidents of all kinds and the percentage of operatives employed who were injured was again lower than in any year in the last decade. Particular attention is paid to enforcing the requirements of the Act with regard to the fencing of dangerous parts of machinery and the steady decrease in the number of accidents is largely due to this fact. Twelve prosecutions for offence under the Act or rules were instituted and all resulted in the imposition of substantial fines.

33.—Trade.

Rail and River-borne Trade.

226. The total trade by rail and river in each of the past three years, excluding animals and treasure, is shown in the following table :— General.

Year.	Imports.		Exports.	
	Weight in maunds.	Value in rupees.	Weight in maunds.	Value in rupees.
1914-15	6,64,24,853	31,23,25,576	5,11,11,130	27,57,74,107
1915-16	6,24,81,999	33,62,97,923	4,96,82,947	31,28,64,401
1916-17	6,02,14,120	34,28,98,851	5,31,85,688	33,89,93,806

The war has caused a steady annual decrease in the volume of imports but a considerable increase in their total value. The volume of exports though greater in the year 1916-17 than in its two predecessors was much below the amount of the pre-war period, but the value was very little less.

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Imports.

227. The net imports of coal and coke for railway purposes advanced by 31¾ lakhs of maunds in weight and Rs. 38½ lakhs in value, owing mainly to increased consumption in railway workshops. The net imports of coal for private purposes increased by 4 lakhs of maunds in weight, and Rs. 13½ lakhs in value, owing to the greater requirements of cotton ginning and pressing factories, and to the growing preference for coal as fuel. The chief increases in value occurred in apparel, Rs. 33½ lakhs, foreign piece-goods (in bales), Rs. 42½ lakhs, alizarine and aniline dyes, Rs. 13½ lakhs, kerosine oil, Rs. 15¼ lakhs, and paper and paste-board, Rs. 8¾ lakhs.

228. The chief decreases in value in net imports were of foreign cotton piece-goods (in boxes), Rs. 85¾ lakhs, gur, rab, &c., Rs. 64¼ lakhs, jowar and bajra, Rs. 41 lakhs, gunny bags and jute cloth, Rs. 18 lakhs, cotton seed, Rs. 17½ lakhs, bars, sheets and girders, Rs. 16¼ lakhs, and refined sugar, Rs. 8 lakhs. The war and the shortage of freight were responsible for the decreased import of cotton piece-goods in boxes, metal bars, sheets and girders and refined sugar, while the bumper harvests of bajra and sugarcane lessened the demand for their import. The fall in the import of jute products is probably due to the decreased export of gram and other grains, and also to the great overseas demand.

Exports.

229. The most important increases in net exports were of raw cotton, Rs. 170¼ lakhs, rice not in husk, Rs. 43¾ lakhs, wheat, 41¾ lakhs, raw hides of cattle, Rs. 30¾ lakhs, saltpetre, Rs. 20¾ lakhs, rape and mustard seed, Rs. 15¼ lakhs, hay, straw and grass, Rs. 14¾ lakhs, and ale and beer, Rs. 14¼ lakhs. The good harvest was responsible for the increased export of cotton, fodder and rice. Government action to a great extent determined the course of the export of wheat. The demand for oil-seeds which was abnormally low in the previous year showed a revival. Punjab breweries benefited by the restriction in the import of beer and ale and are helping to supply the deficiency in the rest of India. The influence of the war is again apparent in the increased exports of saltpetre which go to England to replace the supplies formerly received from Belgium and Germany.

230. The chief decreases in exports were in gram and pulse, 39½ lakhs of maunds in weight, and Rs. 248½ lakhs in value, which is ascribed to the poor crop and to freight difficulties. For the same reasons the export of other grains also decreased—by 13 lakhs of maunds valued at Rs. 56 lakhs. Woollen piece-goods also declined—by Rs. 10½ lakhs in value.

Treasure.

231. Owing to high prices the gold and silver bullion market was exceedingly quiet. This caused a fall in the net import of gold and silver of Rs. 75¾ lakhs and Rs. 118¼ lakhs, respectively. The net imports of gold coin advanced by Rs. 3 lakhs, but its issue from treasuries is still stopped, and in its place money transactions are carried on in silver coin, the imports of which increased by Rs. 210¼ lakhs.

TRANS-FRONTIER TRADE.

General.

232. With effect from the 5th June 1916, import and export trade with Chinese Tibet ceased to be registered at Sultánpur, the work of registration being transferred to the branch postmaster at Kyelang. This change has affected the returns by the inclusion therein of trade with the country between Sultánpur and Kyelang which formerly escaped registration. Compared with the previous year there was an increase of 4,481 maunds in the weight and Rs. 37,427 in the value of goods imported, and a decrease of 1,645 maunds in the weight and Rs. 2,00,979 in the value of exports.

Afghanistan.

233. There was a slight decline in the import trade with Afghánistán, and a very considerable decrease in the export trade. The value of unmanufactured leather exported indeed increased by Rs. 24,000, but there were even larger decreases in the value of the exports of manu-

factured leather, Indian piece-goods, husked rice and iron owing to the shortage of supply and the rise of prices in India. Altogether there was a net fall of 3,260 maunds in the weight and of Rs. 99,892 in the value of goods exported to Afghánistán.

234. The weight and value of goods excluding treasure imported from Central Asia fell by 526 maunds and Rs. 1,18,720, respectively. The value of paints and colours imported rose by Rs. 29,065, though there was a falling off of 13 maunds in the weight, facts which reflect the great rise in prices in India owing to the war. Similarly there was a decrease of 148 maunds in the weight of raw silk imported accompanied by a rise of Rs. 15,201 in the value. Imports of charas were less by 1,657 maunds in weight and over Rs. 1½ lakhs in value, owing to the large accumulated stocks held in the Punjab. Imports of raw wool increased by 1,332 maunds, but the value reported was Rs. 6,736 less than in the previous year. Central Asia.

235. The weight of goods exported to Central Asia rose by 345 maunds, but the value fell off by Rs. 1,19,336. An increase in the exports of tea was due to the failure of supplies usually obtained in Yárkand from Russia. Exports of cotton piece-goods increased by 386 maunds, and though there was an apparent fall of over Rs. 55,000 in the value, this was due to the exaggeration of rates in the previous year which has now been corrected. The weight of indigo exported rose from 15 to 72 maunds and the value from Rs. 2,693 to Rs. 27,725. A decrease of over 30 per cent. in the export trade in skins is due to the substitution of skins obtained from China for the skins previously exported from India to Yárkand. The value of manufactured silk exported fell by over Rs. 80,000 owing to the shortage of supplies in India. To this cause may also be attributed a decline of Rs. 26,437 in the value of unmanufactured leather exports, though the existence of large stocks in Yárkand also affected the trade.

236. Both the import and the export trade with Tibet increased. In the case of exports there was a rise of 1,270 maunds in the weight and of Rs. 18,249 in the value, while imports increased by Rs. 1,58,163 in value and 5,271 maunds in weight. A part of the increase is due to the inclusion of trade which had previously escaped registration, but the demand for wool in India accounted for an increase of about 1,400 maunds in the weight and nearly Rs. 1 lakh in the value of raw wool imported and a corresponding increase in the number of sheep and goats employed to carry the wool and disposed of on arrival in India. The high prices obtained for borax in the previous year resulted in an increase of Rs. 29,000 in the value of borax imported during 1916-17, while the demand for salt in India is shown by the fact that the imports of the commodity were nearly trebled. The export trade presented no particularly noticeable features beyond a satisfactory increase in the exports of Indian tea. Chinese Tibet.

237. The total amount of gold and silver, including coin and Russian paper currency, imported from Central Asia during 1916-17 amounted to Rs. 9,82,358 or Rs. 8,60,682 more than the previous year. The total exports to Central Asia amounted to Rs. 72,475 or Rs. 23,696 less than the previous year. The total amount of silver including coin exported to Chinese Tibet amounted to Rs. 1,06,962 or Rs. 79,032 more than the previous year. The imports of gold and silver were much the largest of recent years, and the reason is to be found in the rise of values in India on account of the war. Treasure.

Joint Stock Companies.

238. The number of registered companies with share capital decreased by 8, 16 old companies having disappeared and 8 new companies being registered. Two companies are reported to be moribund and with their disappearance there will remain 78 active companies. The activities of an

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important firm of English bankers were a feature of the year, and resulted in an increase of paid-up capital amounting to nearly Rs. 72¾ lakhs, a most satisfactory contribution to the industrial revival of the province. The number of Life Assurance Companies remains the same; one Provident Insurance Company was struck off.

34.—Buildings and Roads.

Total expenditure.

239. The total outlay on public works by the Buildings and Roads Branch of the Public Works Department amounted to Rs. 49·3 lakhs or Rs. 19·17 lakhs less than in the previous year. This reduction was due partly to the general curtailment of expenditure necessitated by the war and partly to the difficulty of obtaining imported stores.

Imperial Civil Works.

240. The outlay on Imperial Civil Original Works was only Rs. 11,314 as compared with over Rs. 1·2 lakhs in 1915-16, and on repairs Rs. 44,536.

Imperial Military Works.

241. The expenditure on original Military Works was Rs. 7,175 and on repairs Rs. 33,236.

Provincial Civil Works.

242. The expenditure on original Provincial Civil Works was Rs. 13,32,376 and on repairs Rs. 17,10,772. Considerable attention was devoted to the surroundings of the King Edward Memorial group of hospital buildings at Lahore. A sum of money has been provided by the King Edward Memorial Fund Committee for repairing and improving the surroundings of a number of tombs and temples in the vicinity and a scheme has been prepared for the repair of these buildings and the planting and grassing of their precincts. Trees and lawns are appearing over the whole site of the Memorial Buildings and the scars caused by the building operations are fast disappearing. The Nila Gumbaz improvement scheme, which was undertaken with the object of improving the open space in front of the Memorial Buildings, has been completed by the erection of the Ewing Hall Hostel, opened by the Lieutenant-Governor on 8th November 1916.

Sanitary Works.

243. Thirteen sanitary schemes estimated to cost Rs. 15·5 lakhs were surveyed and projects prepared by the Sanitary Engineer, who also scrutinised 23 other schemes estimated to cost Rs. 3·75 lakhs. The most important works were the extension of the tube-well water supply at Dera Gházi Khan and of the filtered canal water supply at Lyallpur. Drainage schemes are in hand or have been completed at Ráwalpindi, Majítha, Gurdáspur, Wazírabad, Eminabad, Tandliánwála, Bhera, Rúpar, Lálamúsa and Shujabad.

Civil Buildings.

244. The boarding-house at the Agricultural College, Lyallpur, was extended by the addition of a residential block complete with mess-room, kitchen and store-room. Considerable progress was also made with the buildings at the Agricultural Station at Hánsi, and the residence and office of the Deputy Director of Agriculture, the store-rooms and the bullock-byre have been completed. The roads are being laid out and the old thatched roofs of the cattle farm are being replaced by flat mud roofs or by corrugated iron. The Lawrence School at Ghora Gali in the Murree Hills was completed at a cost of about Rs. 3·23 lakhs.

Communications.

245. Expenditure on original works under the head Communications amounted to Rs. 2,48,702 and on repairs to Rs. 12,07,114. A masonry bridge over the Dodni nullah on the Hoshiárpur-Dharmsála road was completed at a cost of Rs. 8,435, and in order to open up communications between the Punjab and the United Provinces, *viâ* Ambála and Saháranpur, a disused railway bridge over the Jumna is being converted into a road bridge. The roads in the outskirts of Lahore received considerable attention, and the Shahdara road was widened and provided with footpaths. The bridge over the Chota Ravi was widened and improvements are in progress on the road to the Shálámár Gardens.

Educational buildings.

246. A new Government High School was completed at Hoshiárpur at a cost of Rs. 1,22,571 and the High School at Montgomery is approaching completion. At Simla a house was built for the Headmaster of the High School, and land has been acquired at Jullundur for the Junior Training College and High School hostel which it is proposed to construct.

Police buildings.

247. Police stations were completed at Sargodha, Karnál, Renála, Núrshah and Kassowál, and a police hospital, police station and city post at Dera Gházi Khan. At Dara Tang a fortified police post has been constructed at a cost of Rs. 9,159.

Medical buildings.

248. The congestion in the lunatic asylum at Lahore is being relieved by the construction of quarantine cells. Quarters have also been built for the European warders and for the asylum menials. A new dispensary was practically completed at Dharmsála.

Contribution Works.

249. The Civil hospital at Hissar was completed for Rs. 43,258. A Protestant Church, to replace the church destroyed in the Kángra earthquake of 1905, has been constructed at Upper Dharmsála. The extension of the Punjab University Library was completed during the year and a residence for the 3rd Assistant Principal of the Aitchison College at Lahore is in progress.

34-A.—Railways.

250. The Jínd-Pánipat Railway was opened for public traffic on the 1st November 1916. The line is owned partly by the Delhi-Ambála-Kálka Railway Company and partly by the Jínd Darbar; its length is 28·80 miles in Jind, and 14·22 miles in British territory. With this exception no new lines were opened and the total mileage of railways of all classes at the end of the year was the same as in the previous year.

35.—Irrigation.

General.

251. In the year under report the direct receipts and expenditure were Rs. 2,87,64,477 and Rs. 1,51,85,347, respectively, as against Rs. 2,52,97,116 and Rs. 1,79,70,928 the average of the previous triennium. The expenditure, as divided between Capital and Working Expenses, was Rs. 34,71,014 and Rs. 1,17,14,333, respectively; the former included Rs. 29,20,731 expended on the construction and completion of the Triple Canals. The indirect revenue credited to the canals on account of enhanced land revenue, etc., amounted to Rs. 1,29,51,275 as against Rs. 1,13,14,514, the average of the triennial period ending 1915-16.

252. The total area irrigated and matured in British districts and Native States by the canals in charge of the Irrigation Department was 9,579,824 acres and 8,976,411 acres respectively showing an increase of 695,013 and 489,366 acres respectively over the figures for the year 1915-16 and 856,052 and 608,589 acres over the average of the previous triennium. The increase is due to development of irrigation on the Triple Canals and to the bumper kharif irrigation during the year. Excluding the Triple Canals, the increase is 233,351 acres and 250,068 acres respectively as compared with the areas, irrigated and matured, of the previous year and is due to the favourable monsoon and to greater care in the distribution of water.

PRODUCTION AND DISTRIBUTION.

253. The financial results of the operations of canals classified as Productive Major Works and the area irrigated by each is shown in the following statement :—

1	2	3	4	5	6	
Name of canal.	Area irrigated.	Gross income.	Working expenses.	Net income.	Percentage of profit on the capital outlay.	
					Excluding interest charges.	Including interest charges.
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
Western Jumna ...	828,457	31 51,750	13,56,021	17,95,729	10·15	7·00
Sirhind	1,425,740	43,63,676	13,87,150	29,76,526	11·63	8·49
Upper Bari Doab ...	1,201,297	52,08,864	14,19,126	37,89,738	17·35	14·17
Lower Bari Doab ...	514,936	9,64,893	6,26,356	3,38,537	1·55	−1·62
Upper Chenab ...	437,477	25,63,550	8,38,264	17,25,286	4·88	1·71
Lower Chenab ...	2,286,729	1,68,30,103	27,19,783	1,41,10,320	43·61	40·42
Upper Jhelum ...	117,605	83,631	6,40,795	−5,57,164	−1·27	−4·45
Lower Jhelum ...	804,761	47,38,593	9,83,962	37,54,631	23·56	20·35
Upper Sutlej Inundation Canals.	313,151	6,08,794	4,41,398	1,67,396	9·19	6·08
Sidhnai	298,556	5,89,749	1,59,012	4,30,737	32·25	29·06
Indus Inundation Canals	265,158	5,28,309	3,98,604	1,29,705	4·35	1·14
Total ...	8,493,867	3,96,31,912	1,09,70,471	2,86,61,441	12·99	9·82

254. The capital outlay expended on the canals in operation as detailed above amounted to Rs. 36,64,709, bringing up the total capital cost of these works to about Rs. 2,361 lakhs including Rs. 154¾ lakhs contributed by Native States. The net revenue earned by the Imperial Canals was Rs. 2,86,61,441 giving a profit of Rs. 12·99 per cent. on the capital invested (Rs. 22,06,16,193). Excluding Triple Canals, the percentage comes to Rs. 22·71. On all the Imperial Canals, Minor Works not classed as Productive, including the two canals for which a capital account is kept, the net profit earned was Rs. 11,36,719 as against Rs. 9,44,305 in 1915-16. On the two Provincial canal systems, there was a loss of Rs. 1,326 as against a loss of Rs. 5,707 in 1915-16.

255. On the canals of the Triple Project the year under review was the first in which all the three canals were in operation. The result of the working of these canals as exhibited in the statement above was poor. This was to be expected as the Upper Jhelum Canal, on which the other two canals, the Upper Chenab and the Lower Bari Doab, are dependent, was opened a year later than was anticipated in the Project and was not able to carry the full supply intended.

256. The important feature of the year was that the construction estimate of the Triple Project was closed on the 31st March 1917 with an expenditure of Rs. 10,10,66,394 against the estimated amount of Rs. 10,36,81,985. Another noticeable feature of the year was the problem of the equitable distribution of the cold weather supply of the rivers Chenab and Jhelum amongst the canals dependent thereon (Upper Jhelum, Lower Jhelum, Upper Chenab, Lower Chenab and

Lower Bari Doab). A rotational programme was arranged by the Chief Engineer after consultation with the Superintending Engineers of the Canals concerned and the distribution effected thereby proved to be, on the whole, fair, but experience indicated modifications which will be tried next winter.

257. The details of the working of each canal are as follows :—

Major Works Canals in operation.

Western Jumna Canal.

258. The canal was closed for 22 days during *kharif* and 4 days during *rabi* so that it ran for 339 days during the year. The monsoon was a good one and the rainfall was above the normal except in the early months of the year. The total area irrigated, including that irrigated in the Patiála and Jínd States, was 828,457 acres (347,913 acres in *kharif* and 480,544 acres in *rabi*) as against 826,688 acres, the average of the previous triennium. The area irrigated during *rabi* was the highest on record and exceeded the previous highest in 1912-13 by about 9,000 acres. The *kharif* area was short by about 13,000 acres as compared with the previous *kharif* on account of an unprecedentedly low supply in the river during the period for sowing.

259. The gross revenue collected was Rs. 31,51,750 and Working Expenses Rs. 13,56,021 which were respectively Rs. 1,01,657 and Rs. 24,996 less than the average of the previous triennium. The net revenue amounted to Rs. 17,95,729 against Rs. 18,72,390, the average of the triennial period ending 1915-16 and Rs. 16,00,937 in 1915-16.

Sirhind Canal.

260. The irrigation for the year (14,25,740 acres) was in excess of the average of each of the two triennial periods ending 1912-13 and 1915-16, although there was a decrease of 81,327 acres as compared with the figures of the previous year. This defect was in *rabi* ; the *kharif* was the second highest on record. The *rabi* area of 880,966 acres was over the average of the triennium ending 1915-16, but slightly less than the average of the 3 years ending 1912-13 which had been inflated by the *rabi* crops of the two very favourable years 1911-12 and 1912-13. The year under review was a very good one on this canal ; the area irrigated has only been surpassed on three occasions. The Native States branches also did very well, the *kharif* area (211,184 acres) being the highest on record. The canal remained in flow for 125 days in *kharif* and throughout the season in *rabi*. The cultivators on this canal gamble on rainfall and had the river been kinder during the *rabi* season, a large portion of the *barani* area, which was in need of water, would have become canal irrigated to the advantage of the cultivators and the canal.

261. The net revenue earned by the British branches amounted to Rs. 29,76,526, or 11·63 per cent. on the capital invested, as against 7·78 per cent. in the previous year. This favourable result was due to —

(*a*) a very good *rabi* in 1915-16 (the second highest on record) collected during the year ;

(*b*) the realization of the uncollected balance of Rs. 1,35,000 at end of the previous year ;

(*c*) the very poor *rabi* of 1914-15 (collected in 1915-16).

Upper Bari Doab Canal.

262. The area irrigated was 569,306 acres in *kharif* and 631,991 acres in *rabi* ; the former being the second highest on record (the previous highest in 1913-14 having been exceeded only by 262 acres) and the latter the highest on record on this canal. The monsoon of 1916 was very favourable and continued up to an unusually late date. Had it not been for this, the total failure of winter rains would have had a much more serious effect upon the agricultural conditions.

263. The net income after defraying the maintenance charges was Rs. 37,89,738, or 17·35 per cent. on the capital invested, as against 15·29 per cent. of the previous year. The percentage charges realized on the work done at the Canal Workshop at Amritsar amounted to only Rs. 67,650 against Rs. 1,04,581 of the previous year, but in addi-

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tion to this a sum of Rs. 68,968 on account of departmental charges on munition work was credited. The Power Station House of the Amritsar Hydro-Electric Pumping Scheme was completed during the year.

Lower Bari Doab Canal.

264. The total area irrigated (514,926 acres) was short by 135,064 acres as compared with the Project forecast. The working of this canal has not been fully established as yet, owing to the supply in the Upper Jhelum Canal (which was opened in December 1915—a year later than anticipated in the Project) having been still short of full design. Cautious increase of the Upper Jhelum Canal supply is necessary for safety. The Lower Bari Doab Canal supply is however more than enough for the area allotted and the canal is in advance of colonization. Proprietary lands have been broken up and are being irrigated. The total area of Crown waste land allotted at the end of the year was 656,391 acres out of the 791,994 acres of culturable area commanded.

265. The gross receipts were Rs. 9,64,893 and the working expenses Rs. 6,26,356, resulting in a net saving of Rs. 3,38,537. The head-quarters of the office of the Superintending Engineer were moved from Lahore to Montgomery in October 1916.

Upper Chenab Canal

266. The monsoon was above the normal and the *kharif* crops were very fair, but the winter season was again abnormally dry and the river supplies again unusually low; great difficulty was consequently experienced in maturing the *rabi* crops, 9 per cent. of which failed. The increase in the *kharif* area (from 159,152 in 1915-16 to 285,917 acres during the year under report) was remarkable, but the *rabi* area, on the other hand, dropped from 165,910 to 151,560 acres. The total direct receipts were Rs. 23,08,678, or Rs. 2,09,149 in excess of the Project forecast, but the indirect receipts (Rs. 2,54,872) were short by Rs. 4,98,744; this was because the system of indirect credit on this canal was complicated and has not been fully settled. The Deg diversion embankment was maintained intact although the flood water reached as high a level as in 1914; the diversion channel has scoured satisfactorily and the possibility of damage by floods has been reduced.

Lower Chenab Canal.

267. Compared with the figures for 1915-16 the area irrigated showed an increase of 2,650 acres. The *kharif* area was larger by 63,128 acres while the *rabi* figures were less by 60,478 acres. The *kharif* area was the third highest on record and the *rabi* area the fourth highest. The net revenue amounted to Rs. 1,41,10,320, giving a return of 43·61 per cent. on the capital outlay of Rs. 3,23,55,018 incurred to the end of the year. In the previous year, the figures were Rs. 1,26,50,247 and 39·78 respectively. The accumulated net profits have increased from Rs. 11,40,60,690 to Rs. 12,71,39,042—about four times the capital cost of the canal.

268. The area remitted amounted to 3,145 acres during *kharif* and 63,110 acres during *rabi*, giving a percentage of 0·44 and 4·01 respectively on the area irrigated. Out of the area remitted during *rabi*, 31,301 acres were attributed to short supply of water in the river and 22,747 acres to the extensive damage done by hail to the wheat and gram crops in the Lyallpur and Jhang Districts. The steps taken to prevent the increase of waterlogging in the Hafizabad Tahsil have been attended with much success; large areas have been reclaimed and considerable areas have been safeguarded against harm from this source.

Upper Jhelum Canal.

269. This was the first year of irrigation from this canal. The canal supply reached five-eighths of its maximum discharge during the year. A large new canal with high embankments requires a continuous increase in supply. The area irrigated was only 117,605 acres as against 245,000 acres anticipated in the Project forecast. The shortage was due to the fact that irrigation commenced a year later than was anticipated.

270. The gross income from all sources amounted to Rs. 83,631, and the working expenses to Rs 6,40,795 resulting in a loss of Rs. 5,57,164 or

1·27 per cent. on the capital invested. This was attributable to the fact that the water rates were collected for the *kharif* crop only.

271. Most of the tramway material made available for sale or transfer after completion of the works, was sent to Mesopotamia and a fair proportion of surplus plant was also disposed of during the year. The names of the Divisions on this canal were changed from I, III, IV and V to Mángla, Jhelum, Phália and Gujrát Divisions, respectively.

Lower Jhelum Canal.

272. The area irrigated was 239,997 acres in *kharif* and 564,764 acres in *rabi* as against 216,857 and 617,319 acres in the corresponding harvests of the previous year. The increase in *kharif* was due to an ample supply of water in the river assisted by good rainfall. The reason for the decrease in *rabi* was the unprecedented droughts and abnormally low river which necessitated the working of the five canals systems on the definite programme of rotational turns. Out of the total area of 804,761 acres irrigated, 405,920 acres were in proprietary villages and 398,841 acres in colony villages. Proposals for the remodelling of the entire canal system are being framed by the Special Project Division created for the purpose.

273. The gross receipts and the working expenses were Rs. 47,38,593 and Rs. 9,83,962, respectively, giving a net revenue of Rs. 37,54,631 or 23·57 per cent. on the capital invested. This was 3 per cent. more than that of the preceding year and was due to (*a*) a decrease in the capital outlay by about Rs. 33,000, (*b*) an increase in the area irrigated during *kharif* 1916 and *rabi* 1915-16, revenue on which was collected during the year under report and (*c*) a very small area having been affected by the failure of crops and the consequent grant of very low remissions.

Upper Sutlej Inundation Canals.

274. During this year, as in the previous year, several important works of improvement, calculated to increase the area of irrigation, were introduced. The net area assessed exceeded by 36,713 acres the average of the triennium ending 1912-13 (266,234 acres), but was less by 19,624 acres than the average of the three years ending 1915-16 which was 322,571 acres and which included the record year of 1914-15. This is quite satisfactory, taking into consideration the fact that the river remained abnormally low throughout the month of May, thereby delaying the date of opening of the canals by more than two weeks.

275. The gross income amounted to Rs. 6,08,794 and working expenses to Rs. 4,41,186, showing a net revenue of Rs. 1,67,396 or 9·19 per cent. on the capital invested. The percentage of the previous year was 18·50.

Sidhnai Canals.

276. The irrigation effected was 114,933 acres in *kharif* and 183,623 acres in *rabi* as against 117,999 and 152,151 acres, respectively, in the preceding year. The percentage of the failed crops was 13·96 in *kharif* and 17·7 in *rabi* against 16·46 and 18·06, respectively, of the preceding year. This is not unsatisfactory in view of the very late rise of the river Ravi and the absence of winter rains during the *rabi* maturing period. The total area irrigated was the second highest on record.

277. The total income from all sources amounted to Rs. 5,89,749 and the working expenses to Rs. 1,59,012, giving a net revenue of Rs. 4,30,737 or 32·25 per cent. on the capital outlay as against Rs. 6,86,187 or 51·5 per cent. in the preceding year. The decrease was due to the decrease in the *rabi* area of 1915-16 which was far short of that of 1914-15 owing to deficiency of water in the river.

Indus Inundation Canals.

278. The area irrigated was 179,941 acres in *kharif* and 85,217 acres during *rabi*. There was a decrease in the *rabi* area, due to earlier fall in the river. The results were on the whole satisfactory, the area irrigated being the third largest on record.

279. The total income was Rs. 5,28,309 and the total expenditure Rs. 3,98,604, giving a net profit of Rs. 1,29,705 against the deficit of Rs. 4,409 in the preceding year.

PRODUCTION AND DISTRIBUTION.

280. The following table exhibits the financial results of the operations of Imperial and Provincial canals and the area irrigated by each :—

Name of Canal.	Area irrigated.	Gross income.	Working expenses.	Net income.
	Acres.	Rs.	Rs.	Rs.
Shahpur Canal (Imperial)	46,769	1,15,018	47,175	67,843
Ghaggar Canal	40,367	21,850	33,585	—11,735
Lower Sutlej Inundation Canals ...	363,884	6,26,728	2,39,727	3,87,001
Chenab Inundation Canals	205,075	4,43,797	1,55,764	2,88,033
Muzaffargarh Inundation Canals ...	398,458	7,53,898	3,51,426	4,02,472
Shahpur Inundation Canals	31,404	45,465	47,609	—2,144

Shahpur (Imperial) Canals.

281. The canals were opened during April 1916 and were closed early in September 1916. They worked satisfactorily although the supply in the river was low. On the 26th April 1917, there was a hailstorm which damaged some of the standing *rabi* crops, but the loss was not as much as it was in the previous two years. The area irrigated was 46,769 acres as against 38,750 acres, the average of the previous triennium. Revenue was remitted on 1,788 acres, of which 1,581 acres were for bad germination, 44 acres for high supply causing flooding of fields and 163 acres for insects and blight. The net revenue of Rs. 67,843 brought a return of 31·42 per cent. on Rs. 2,15,914 the capital outlay to date.

Ghaggar Canals.

282. Excluding the *palever* area included in the figures for the years previous to 1913-14, the area irrigated during the year was the highest on record. The operation of the year resulted in a loss of Rs. 8,630 which is equivalent to 2·29 per cent. on the capital outlay, as compared with a loss of Rs. 18,473 or 4·91 per cent. in the previous year. As remarked in previous reports, so long as the canals receive no credit for the fluctuating revenue on the greater part of the irrigation which they affect, they cannot be expected to be remunerative.

IMPERIAL MINOR WORKS WITH REVENUE ACCOUNTS ONLY.

Lower Sutlej Inundation Canals.

283. The irrigated and matured areas were the second highest on record. The total area which failed to mature was 43,271 acres against 41,759 acres during the preceding year. The increase is mainly attributable to lack of rainfall during the *rabi* maturing period. The net revenue was Rs. 3,87,001 against Rs. 3,36,156 for the year 1915-16 and an average of Rs. 3,20,796 in the previous triennium.

Chenab Inundation Canals.

284. The river Chenab remained abnormally low till the first week of June and consequently the opening of canals was late. It rose rapidly, however, after this date and gave good supplies until the end of August. Generally speaking, the Chenab Canals did well during the year. The crops were fair and there were no calamities.

Muzaffargarh Inundation Canals.

285. The year's results were generally excellent. In spite of the late opening of the Chenab series the areas both irrigated and matured constitute a record. The percentage of failed area, although slightly above that of the preceding year, was lower by 2·6 per cent. than in the previous triennium and less than in any other year since 1902.

Shahpur (Provincial) Canals.

286. The increase in irrigation over the preceding two triennia was due to the satisfactory state of the river supply and to timely rainfall. Revenue was remitted on 1,659 acres, of which 1,243 acres were remitted under tenancy rules, 390 acres for bad germination and 26 acres for high supply causing flooding of the fields. There was a loss of Rs. 2,144 in the year's working which was due to higher working expenses and the fact that a considerable area was irrigated free of water rates under tenancy rules.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1916.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the year 1916-17.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1916-17.

Stamps.—Report on the Administration of the Stamp Department of the Punjab for the triennium ending 31st March 1917.

Income-tax.—Report on the Income-tax Administration of the Punjab during the triennium 1914-15, 1915-16, 1916-17.

Forests.—Progress Report of Forest Administration in the Punjab for 1916-17.

Provincial Revenues.—Audit and Appropriation Report on the Accounts of the Punjab for 1916-17 and Financial Statement published in the *Punjab Gazette*, Part V, of 30th March 1917.

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1916-17.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1916-17.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume I—Commercial Statistics.
Volume II—Financial Statistics.
Volume IV—Administrative and Judicial (including area, population and local funds).

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1916-17.

36.—Gross Revenue and Expenditure.

287. The following table shows the receipts under the various heads of revenue in the year under report :—

Major heads.	Imperial.	Provincial.	Total.	+ more − less on figures for 1915-16.	REMARKS.
	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
Land Revenue	1,42,59	1,42,59	2,85,18	+ 5,41	
Opium	7,46	...	7,46	+ 1,30	
Salt	95,28	...	95,28	+ 49,13	
Stamp	29,91	29,91	59,82	+ 1,71	
Excise	37,93	37,94	75,87	+ 5,27	
Provincial Rates	...	32	32	+ 1	
Customs	23	...	23	+ 15	
Income tax	12,31	12,31	24,62	+ 6,06	
Forests	...	16,88	16,88	− 39	
Registration	...	3,72	3,72	+ 16	
Tributes	1,46	...	1,46	+ 2	
Interest	2,55	2,76	5,31	+ 58	
Law and Justice—Courts of Law ...	...	6,90	6,90	+ 1,22	
Law and Justice—Jails ...	...	4,16	4,16	− 28	
Police	...	2,70	2,70	+ 71	
Education	...	5,22	5,22	+ 31	
Medical	...	33	33	− 7	
Sanitation	...	1,22	1,22	+ 84	
Agriculture Department ...	...	2,51	2,51	+ 24	
Scientific and Miscellaneous ...	...	31	31	+ 4	
Receipts in aid of Superannuation ...	1,28	72	2,00	− 21	
Stationery and Printing ...	83	1,08	1,83	+ 48	
Miscellaneous	7,76	5,50	13,26	+ 5,76	
Irrigation—Major Works ...	1,98,24	1,98,23	3,96,47	+ 50,50	
Irrigation—Minor Works ...	9,60	63	10,23	+ 66	
Civil Works	87	4,21	5,08	+ 65	
Transfers between Imperial and Provincial.	− 37,48	+ 37,48	...	...	
Total ...	5,10,82	5,17,55	10,28,37	1,30,25	

288. The gross expenditure excluding expenditure of the Military, Railways, Post Office and Telegraph Departments and capital expenditure on Canals was as follows :—

Major heads.	Imperial.	Provincial.	Total.	+ more − less than figures for 1915-16.	Remarks.
	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,000	
Refunds	98	1,07	205	+ 34	
Assignments	66	35	1,01	+ 15	
Land Revenue	...	47,29	47,29	− 2,18	
Salt	6,24	...	6,24	+ 1,08	
Stamps	89	88	1,77	− 1	
Excise	1,16	1,16	2,32	+ 6	
Income-tax	14	13	27	+ 15	
Forests	...	9,35	9,35	+ 11	
Registration	...	1,24	1,24	− 2	
Interest	1,62	1,94	3,56	+ 8	
General Administration ...	4,38	12,51	16,89	+ 9	
Law and Justice—Courts of Law ...	...	44,95	44,95	− 249	
Law and Justice—Jails ...	...	17,61	17,61	− 33	
Police	...	64,49	64,49	+ 24	
Education	...	42,78	42,78	− 1,32	
Ecclesiastical	2,45	...	2,45	− 16	
Medical	...	8,04	8,04	− 4,37	
Sanitation	...	8,29	8,29	+ 1,04	
Political	6,25	...	6,25	+ 3	
Agriculture	...	12,41	12,41	+ 31	
Scientific and Miscellaneous Departments.	...	1,48	1,48	+ 9	
Pensions, Territorial and Political ...	71	...	71	− 1,53	
Superannuation	2	24,25	24,27	+ 1,09	
Stationery and Printing ...	4	7,16	7,20	− 76	
Miscellaneous	53	5,26	5,79	+ 1,45	
Famine relief *	6,95	5,55	12,50	+ *3,83	
Reduction or Avoidance of Debt ...	...	1,40	1,40	...	
Irrigation—Major Works ...	86,74	86,74	1,73,48	− 2,41	
Irrigation—Minor Works ...	8,07	2,64	10,71	− 44	
Civil Works	2,52	49,81	52,33	− 17,12	
Total ...	1,30,35	4,58,78	5,89,13	− 23,00	

* There was a mistake in the figures shown in the report for 1915-16. Correct figures were :—

	Rs. 1,000
Provincial	7,09
Imperial	1,58
Total ...	8,67

37.—Land Revenue.

289. The Land Revenue Report gives the figures for land revenue for the agricultural year ending 30th September, whereas the financial year ends on 31st March. There must consequently always be a difference between the total collections as calculated by the Treasury and the yearly returns furnished by the Financial Commissioners' office.

290. The Land Revenue Report for the year ending 30th September 1916 shows the following figures for collections including those on account of previous years, comments on which have already been made in section 10 dealing with demands :—

	Rs.
Fixed Land Revenue	2,12,50,035
Fluctuating Land Revenue	1,22,08,312
Temporarily excluded from fixed Land Revenue Roll	5,43,411
Other Land Revenue	38,62,592
Total ...	3,78,64,350

38.—Irrigation.

291. The total capital invested up to the end of 1916-17 on canals in operation classed as Productive Major Works was Rs. 22,06,16,193. Capital expenditure during the year amounted to Rs. 36,64,709. The income from all sources, excluding refunds, was Rs. 3,96,31,912. Working expenses totalled Rs. 1,09,70,471. Interest charges amounted to

Rs. 70,03,847. The net profit left was Rs. 2,16,57,594 as against Rs. 1,64,21,265 in the previous year.

292. The balance profit on Imperial Canals, Minor Works not classed as Productive, was Rs. 11,36,719 as against Rs. 9,44,305 in 1915-16. Provincial Canals show a deficit of Rs. 1,326 as against one of Rs. 5,705 in the preceding year.

39.—Excise and Opium.

293. Perhaps the most noticeable feature in the excise administration of the year 1916-17 was the greatly enhanced demand for Indian-made liquor, particularly beer. The explanation is not to be found in any spread of the drink habit, but in the large concentration of troops in the Province and the adjoining area supplied from the Province and in the prohibitive prices of imported liquors—consequent on enhanced freight and import duty—which diverted consumers to the cheaper Indian products. Thus the war which had such an adverse effect on the indigenous liquor industry in the previous year, brought it renewed prosperity in the year under report. General.

294. This increased demand was reflected in a rise of over 23 per cent. in the proceeds from the duty on the articles in question. By far the largest proportionate increases are to be found in the beer duty which rose by Rs. 3,26,222 or 213 per cent. to Rs. 4,79,269, and in the duty on country-made foreign spirit which increased by Rs. 1,55,022 or 179 per cent. to Rs. 2,41,576. There was also a rise of Rs. 1,64,059 or 6 per cent. in the proceeds of the country spirit duty. These three items of revenue far more than compensated for the fall of Rs. 1,06,630 (6 per cent.) in the country spirit vend fees. The total income from liquor rose by Rs. 4½ lakhs or 11 per cent. to Rs. 50½ lakhs, the highest figure it has hitherto reached. This added to the income from opium (Rs. 16,54,916) and other drugs (Rs. 8,61,292), which was slightly in excess of the previous year's figures, brought the total excise revenue to Rs. 75,80,883, representing an increase of Rs. 5¾ lakhs or 8 per cent. over the excise revenue of 1915-16.

295. The extraordinary boom in Indian-made beer is also strikingly exhibited in the returns of issues and sales. The former increased from 960,054 to 2,272,192 gallons and the latter from 886,000 to 2,780,000 gallons. The British Territorials seem to have acquired a taste for the light Indian product, and this and the high price of the imported article have revived the waning prosperity of the Indian brewer. Sales in the bazar shops, however, somewhat declined, the Indian public apparently showing a growing preference for spiced spirit. Liquor.

296. Apart from beer, the consumption of which is mainly confined to British troops, the increase in revenue was obtained without any marked increase in the normal consumption. Thus while the consumption of country liquor (358,000 gallons) was 7 per cent. above that of 1915-16 (332,000 gallons), when the consumption for temporary reasons had fallen unusually low, it was 7 per cent. below the consumption (382,000 gallons) of 1914-15, which in its turn was much below the figures for 1913-14 (418,000 gallons). Leaving aside temporary fluctuations, the fact that there has been a reduction of nearly 15 per cent. in consumption during the last 4 years is a matter for satisfaction and it may be regarded as axiomatic that this decrease would not have taken place but for the increase in the duty. A decrease in licit consumption caused by higher prices would naturally encourage illicit consumption, but the energetic measures taken during recent years to combat illicit distillation have undoubtedly obtained a fair degree of success, and several authorities ascribe the rise of 7 per cent. in the consumption of country spirit within the last year to those measures. In the increased assistance given by lambardars and their growing sense of their responsibilities in this matter the excise administration will continue to find their chief support in stamping out the evil. How widespread the evil is, is shown by the

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fact that in 1916-17 no less than 311 cases of illicit distillation came to light in the ten central districts. In these cases 303 persons were sent up for trial and 212 were convicted. Convictions for drunkenness decreased from 961 to 823.

297. The number of country spirit retail licenses was reduced from 719 to 692. With the object of diminishing consumption and drunkenness the policy of closing liquor shops during fairs and converting shops for "on" consumption into shops for "off" consumption was further continued: 73 licenses in connection with the holding of fairs were discontinued during the year, but three were allowed in the Ludhiana District, where smuggling was apprehended. The introduction of the sealed bottle system throughout the Ferozepore District and in parts of Ludhiána and Gurdáspur was tried, and its extension to other districts of the province is now under consideration. Local and municipal bodies were the regular advisors of the Collector on questions of excise policy.

298. In the latter part of the year the restriction of the sale of special (spiced) spirit to the vend area of the distillery of manufacture was removed, and denatured spirit of local manufacture was exempted from payment of excise duty on issue from Punjab distilleries.

Opium.

299. The Government of India's sanction to the publication of the revised opium rules was received during the year and the rules were notified in October 1916. There was a decrease in the consumption of Excise opium from 53,048 to 51,007 *sers*, and the opium revenue also suffered from the fact that the rise in the cost price of excise opium which took effect at the beginning of the year was not followed by any corresponding enhancement of the issue price till April 1st, 1917. Thus, the gains from sale-proceeds fell from Rs. 8,75,292 to Rs. 7,14,958, but an increase both in the duty on other kinds of opium and in the bids for license fees counterbalanced the decrease. There were several cases of opium smuggling during the year. The most notable seizure was that of ten *sers* of excise opium in the possession of a notorious smuggler at Ferozepore.

Charas and bhang.

300. The consumption of *charas* increased from 21,851 to 22,966 *sers*, but that of *bhang* fell from 102,562 to 93,339 *sers*. The continued rise in the consumption of *charas* has necessitated further enhancement of the duty from Rs. 14 to Rs. 18 per *ser*.

Cocaine.

301. The number of licenses for the sale of cocaine was 52 as in the previous year. There was, however, a large falling off, from 15,569 to 8,862 grains, in the amount sold. The sale of the drug was greatly affected by the high prices and the difficulty of import due to the war.

40.—Salt Revenue.

Cis-Indus and Kalabagh Mines.

302. The quantity of salt excavated during the year was 4,623,578 maunds or 14·56 per cent. more than in 1915-16. Issues amounted to 4,545,989 maunds or 14·18 per cent. more than last year, and sales to 6,878,899 maunds or 39·23 per cent. more than the sales of 1915-16.

303. The price, 1 anna and 6 pies a maund, remained unchanged during the year under report. There was a net profit of Rs. 1,21,928 as compared with a profit of Rs. 57,380 in 1915-16. The through traffic sales, which amounted to 5,435,418 maunds, increased by 830,814 maunds or 18·04 per cent. and formed 88·71 per cent. of the total rail-borne trade of the Division, as compared with 96·04 per cent. in 1915-16.

Mandi Mines.

304. The sales from the Mandi mines, 113,339 maunds, were more by 35,125 maunds or 44·91 per cent. than the sales of the previous year.

Sultanpur Salt Works.

305. The sales of Sultánpur salt, 26,276 maunds, decreased by 12,603 maunds as compared with the sales of the previous year. The price

at which salt was sold by the manufacturers at the Sultánpur Salt Works ranged from 5 annas to 10 annas 6 pies a maund, the average price being 6 annas a maund as compared with 5 annas 9 pies a maund in the preceding year.

INTERNAL BRANCH.

306. Fees from licenses for the manufacture of saline substances realised Rs. 5,718 as compared with Rs. 4,198 in 1915-16.

GENERAL.

307. Excluding the operations of the Internal Branch, complete Provincial figures of which are not published, the accounts for the Punjab including excise duty are as follows:—

Source.	*Receipts.*	*Charges.*	*Net receipts.*
	Rs.	Rs.	Rs.
Cis-Indus	94,79,363	6,13,095	88,66,268
Mandi	16,094	5,050	10,999
Sultánpur	32,870	9,191	23,679

41.—Stamp Revenue.

308. Receipts under the Court-fees and Stamp Acts amounted to Rs. 59,87,134 in 1916-17 as compared with Rs. 58,19,745 in 1915-16. Of the total increase of Rs. 1,67,389 the judicial stamps contributed Rs. 80,202. This increase was attributed to enhanced litigation, to a general rise in the conventionally assumed value of land in consequence of enhancement of land revenue in recently settled districts, and to good harvests assisting both zamindars and sahukars—the former in the redemption of their lands and the latter in the recovery of their debts. A special cause of increase in certain districts was the popularity of insolvency proceedings among agricultural debtors who appear to have regarded bankruptcy merely as a method of obtaining a privileged status against their creditors.

309. The receipts from non-judicial stamps rose from Rs. 19,68,957 in 1915-16 to Rs. 20,56,144 in the year under report. The largest increase was on account of impressed sheets. This was ascribed to various causes, such as the rise in the value of immoveable property in the towns owing to keen competition for building sites and the substitution of formal deeds for irregular entries in account books. But the increase seems to be a natural result of provincial development, checked in some degree by the war and the results of the bank failures. Another noticeable increase occurred under share transfer stamps, and was due to the amalgamation of the Punjab Banking Company and the Delhi and London Bank with the Alliance Bank of Simla. The receipts from Hundis, impressed labels and foreign bill stamps seem to be recovering from the effects of the war and the Bank crisis. Elsewhere there is little to notice in the working of the Stamp Department, except that there was a marked improvement in the number of cases in which insufficiently stamped and unstamped documents were dealt with by the courts.

310. The expenditure of the Department fell from Rs. 2,40,823 in 1915-16 to Rs. 2,30,033.

42.—Income-tax.

311. Act V of 1916, enhancing the rates of assessment, came into force on April 1st, 1916. The result was apparent in an increase in the final demand which rose by 51 per cent. from Rs. 15,24,378 in 1915-16 to Rs. 23,03,524. These figures, though remarkable in themselves, do not correctly express the commercial wealth of the province. The big exporting firms do not as a rule pay their income-tax in districts where a large proportion of their profits accrue, but in Calcutta, Bombay, Karáchi, Shikárpur and other commercial centres where they declare their principal place of business or residence to be. The amount of assessable income thus annually lost to one district, Lyallpur, is estimated to be between 8 and 10 lakhs of rupees. General.

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Tax on salaries.

312. The tax on salaries paid by Government rose by 42 per cent. from Rs. 3 lakhs in 1915-16 to Rs. 4,26,894, mainly as a result of the increased rates, and on those paid by local authorities from Rs. 13,351 by 16 per cent. to Rs. 15,593. The tax on salaries paid by companies, etc., increased by 37 per cent. from Rs. 61,957 in 1915-16 to Rs 85,198. The recoveries at the source under section 9 (2) of the Act rose from Rs. 36,278 in 1915-16 to Rs. 52,525.

Profits of companies.

313. The number of assessees under this head rose by 8 and now stands at 89. In 1913-14 it was only 58. The receipts rose from Rs. 96,450 in 1915-16 to Rs. 1,40,666, of which Rs. 81,232 represents the tax paid by one company. The increase is due mainly to the enhanced rates.

Other sources.

314. Under other sources of income there has been a rise in the number of assessees and also in the collections, the latter having increased from Rs. 13,22,445 in 1915-16 to Rs. 17,00,740. As the number of assessees in classes I to IV with incomes less than Rs. 2,000 has risen from 21,475 to 23,104, it will be seen that a substantial portion of the increase is due to the general increase in prosperity and the efforts of the special assessing agency. This agency consists of an Extra Assistant Commissioner with three Naib Tahsildars and office establishment and its activities have been extended to seven large towns in the province with considerable success.

Group assessment.

315. The group system of assessment has been tried in 12 districts with conflicting results. In some places it has met with a moderate degree of success, but on the whole there appears to be a tendency to over-assess the poor to the benefit of the rich, and though doubtless in some cases the method is not without value, the panchayats as a rule do not appear to possess the confidence of tradesmen.

43.—Forest Revenue.

316. The revenue for the year ending June 30th, 1917, was Rs. 16·92 lakhs and the expenditure Rs. 9·66 lakhs, yielding a cash surplus of Rs. 7·26 lakhs. The revenue and expenditure were classified as follows :—

Revenue.

I.—Timber cut from forests by Government agency	7·02	lakhs.
II.—Timber removed by purchasers and consumers ...	7·81	„
III.—Drift and waif-wood	·34	lakh.
IV.—Revenue from forests not managed by Government	·03	„
V.—Miscellaneous	1·73	lakhs.
Total ...	16·93	„

Expenditure.

Conservancy and works	5·19	lakhs.
Establishments	4·48	„
Total ...	9·67	„

317. The revenue decreased by Rs. 1·25 lakhs and the expenditure rose by Rs. 0·43 lakh. The decrease in revenue was chiefly due to smaller sales of trees in hill forests than in the preceding year and also to the completion of the clearing of tree growth from areas coming under colonization. The rise in expenditure was due to larger expenditure on account of extensive departmental extraction in Rawalpindi and to the rapid expansion of the resin industry.

318. The results of the year's working show a surplus of Rs. 9·06 lakhs, as follows:—

Cash surplus	7·26	lakhs.
Increase in value of stock	·03	lakh
Increase of outstanding revenue	·38	„
Increase in outstandings against contractors ...	·21	„
Capital expenditure less interest	1·18	lakhs
Total ...	9·06	„

44.—Provincial Revenue and Expenditure.

General.

319. The provincial shares of the revenue raised and the expenditure incurred in the Punjab during the last two years, with the opening and closing balances in each year, are shown in the table below:—

	1915-16.	1916-17.
	Rs. (thousands).	Rs. (thousands).
Opening balance	52,21	63,55
Income	4,40,87	4,80,07
Net transfers from Imperial to Provincial	47,65	37,48
Total ...	5,40,73	5,81,10
Expenditure	4,77,18	4,58,78
Closing balance ...	63,55	1,22,32

Income.

320. The improvement of over Rs. 39 lakhs is chiefly contributed by Irrigation—Major Works which head alone accounts for Rs. 25,25,000 owing to the extension of irrigation from the Triple Canal System. Land Revenue shows a rise of Rs. 2,70,000 due chiefly to the collection of large amounts of suspended revenue consequent on the good monsoon, while fluctuating collections also increased considerably owing to the large area irrigated. The good monsoon is again the chief reason for the increase of Rs. 86,000 under Stamps. The rise of Rs. 2,64,000 in Excise receipts is largely due to the higher duty on malt liquors and to more extensive sales of Indian-made liquor consequent on restricted imports from Europe. Income-tax receipts rose by Rs. 3,03,000 mainly owing to the enhanced rates which came into force this year. Law and Justice receipts, chiefly magisterial fines, increased by over a lakh of rupees while the improvement of Rs. 1,20,000 in Miscellaneous receipts is chiefly due to higher copying agency receipts. The only decrease of any importance was under Forests and was due to the inclusion of income from arrear fellings in the returns of the previous year.

Assignments.

321. The decrease of Rs. 10 lakhs is mainly accounted for by the absence of the assignment made to provincial revenues when the net income from irrigation falls short of Rs. 41 lakhs.

Expenditure.

322. The expenditure figures show a saving of about Rs. 18 lakhs as compared with the previous year. The chief decrease occurs under Civil Works (Rs. 15,66,000) and was due partly to a difference in classification of grants to certain District Boards and partly to the curtailment of expenditure due to the war. The large reduction of Rs. 4,37,000 under the Medical head is chiefly due to the depletion of staff caused by officers going on military service. Similar causes, assisted by smaller expenditure on grain compensation allowance, combined to produce a saving of over Rs. 2 lakhs under the Land Revenue head. The decrease of Rs. 2,49,000 under Law and Justice—Courts of Law—is chiefly due to the absence of the Special Tribunals which were a eature of the previous year.

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Under Education the decrease of Rs. 1,32,000 occurs chiefly under grants-in-aid, while the savings of Rs. 1¼ lakhs under Irrigation—Major Works are due to lower interest charges. The only important increases occur under Famine Relief, Rs. 3,97,000, due to fodder concessions, under Sanitation, Rs. 1,04,000, owing to large purchases of quinine and slightly more liberal sanitary grants and under Superannuation, Rs. 1,10,000, which is mainly the result of normal expansion.

Balances.

323. The net increase of Rs. 29,03,000 in receipts and the decrease of Rs. 18,40,000 in expenditure resulted in the provincial balance being raised from Rs. 63,55,000 to Rs. 1,22,32,000 of which Rs. 11,17,000 is the unspent balance from the Imperial grants for Sanitation.

45.—Local Funds.

324. The gross income of district boards rose to Rs. 78¾ lakhs, or Rs. 3¾ lakhs more than last year. This increase is due chiefly to an increase in the income from the local rate and to larger Government grants. The former rose from 34½ to 36½ lakhs of rupees and the latter from Rs. 24,89,932 to Rs. 24,92,961. Expenditure fell from about Rs. 84 lakhs to Rs. 76¼ lakhs. This decrease is accounted for by the difficulty experienced in carrying out civil works owing to the war and the consequent scarcity of materials.

325. Receipts under education amounted to about Rs. 16 lakhs as against Rs. 14¾ lakhs last year, the increase being due to larger school fees and larger Government contributions. The gross expenditure also increased from Rs. 23,14,740 to Rs. 24,09,227. The net expenditure by boards on education was thus a little over Rs. 8 lakhs, or a lakh more than last year. Income under the head ' Medical ' rose from Rs. 97,142 to Rs. 1,07,510. The increase is spread over various sub-heads, the most noticeable feature being the high figures of endowments in Karnál and Ferozepore and of hospital receipts at Ferozepore and Muzaffargarh. Expenditure decreased from Rs. 7,84,047 to Rs. 7,76,901 owing principally to a large reduction in plague charges. The expenditure on hospitals rose from Rs. 4,31,772 to Rs. 4,83,497.

326. There was a falling off by a lakh in receipts under the head " Civil Works," chiefly owing to the reduction of Government grants. The expenditure decreased from Rs. 43,19,741 to Rs. 34,94,979. A number of works have had to be postponed owing to the war and the scarcity of materials and it is not surprising to find that Rs. 3½ lakhs less was spent on new buildings, Rs. 1½ lakhs less on new roads and Rs. 3¼ lakhs less on repairs to roads.

46.—Municipal Funds.

327. The total income of municipalities rose from Rs. 74,85,062 to Rs. 82,00,418 and thus almost reached the figure of 1914-15. The income from taxation was Rs. 45 lakhs, and the increase under the head Octroi has already been noticed. The aggregate expenditure for the year was practically the same as for 1915-16, Rs. 70,55,136 as compared with Rs. 70,29,861, and the total balance at the close of the year rose from 36 to 40 lakhs of rupees. Under the head Water-supply there was a fall from Rs. 6,45,226 to Rs 6,39,020, and under Drainage from Rs. 13,45,460 to Rs. 12,34,372. Under Public Works, Buildings, there was a decrease from Rs. 1,47,905 to Rs. 1,39,867, but a rise under Roads from Rs. 5,60,889 to Rs. 6,60,406. Medical expenditure increased from Rs. 6,89,831 to Rs 7,18,624 and Public Instruction from Rs. 5,75,906 to Rs. 6,07,858.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below:—

PROVINCIAL REPORTS.

Census—Report on the census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishen Kaul, C.I.E.

Births and Deaths— } Report on the Sanitary Administration of the Punjab and
Sanitation— } Proceedings of Sanitary Board for the year 1916.

Emigration—Census Report as above.

Medical Relief—
- Triennial report of the working of the Charitable Dispensaries in the Punjab for the years 1914, 1915 and 1916.
- Report of the Pasteur Institute, Kasauli, for the year 1916.
- Report on the working of the Punjab Lunatic Asylum for the year 1916.

Vaccination—Report on vaccination in the Punjab for the year 1916-17.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume III—Public Health.

47.—Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1911-12.]

48.—Births and Deaths.

328. Calculated on the estimated population as ascertained by the method referred to in the last report, the birth and death-rates for the year 1916 were 42·3 and 28·5 respectively per thousand. The rates calculated on the 1911 census figures work out at 45·6 and 30·7 and in all districts except Simla were higher than the rates calculated on the estimated population. In Simla the birth-rate based on the estimated population was higher than and the death-rate equal to the rates based on the census figures.

329. The year 1916 was a healthy one except for its latter part when malaria was prevalent and resulted in a total death-rate from fevers in excess of those recorded in recent years. The death-rate from plague was the lowest since 1900, and that from cholera also showed a considerable reduction. Deaths from other diseases varied but slightly, except in the case of small-pox and "all other causes" which accounted for more deaths than in recent years. The birth-rate is with two exceptions the highest recorded since the commencement of registration in the Punjab.

330. The number of births registered in 1916 amounted to 881,546 Births. of which 461,540 were of males and 420,006 of females. The total birth-rate, 45·6 *per mille* of the census population, was 2·0 in excess of that recorded in the previous year. The increase in the birth-rate was shared by both sexes, *i.e.*, male 23·9 and female 21·7 as against 22·8 and 20·8, respectively.

VITAL STATISTICS AND MEDICAL SERVICE.

331. The birth-rate this year is satisfactory and is due no doubt, to the absence of severe epidemics of plague and cholera. It has only twice been exceeded since 1878, once in 1899 and again in 1914, when it was 48·4 and 46·3, respectively. No other province recorded so high a birth-rate during the year under report.

332. The highest birth-rate was recorded in the Ferozepore District where it amounted to 52·7, Karnál coming next with 52·2 and Rohtak 51·4. These rates were closely followed by those of Lyallpur (51·1), Lahore (51·0) and Montgomery (50·1). The lowest rate was as usual recorded in Simla where it amounted to 21·4, Dera Gházi Khan, Kángrá, Jhelum and Ráwalpindi coming next in order with rates of 30·8, 33·5, 37·6 and 38·6, respectively. The excess of births over deaths amounted to 14·9 *per mille* for the whole province.

Deaths.

333. The total number of deaths during 1916 was 593,670 of which 309,973 were of males and 283,697 of females. The resulting death-rate, 30·7 *per mille* of the census population, is 5·6 less than that for the previous year and 1·0 *per mille* less than the average for the previous five years. Of this death-rate 19·4 or more than half was due to fevers, 7·1 to "all other causes," and 2·6, 0·8, 0·2 and 0·4 to respiratory diseases, dysentery and diarrhœa, small-pox and injuries respectively. All these rates are higher than those recorded in the previous year. The decrease in the provincial death-rate is due entirely to the lessened incidence of cholera and plague with recorded rates as low as 0·1 and 0·2 compared with 0·7 and 11·5, respectively, in the preceding year.

334. The highest death-rate was recorded in Miánwáli (40·3) and the rate was above the provincial figure in Kángrá (35·1), Muzaffargarh (34·7), Ráwalpindi (33·6), Ferozepore (33·5), Ambála (32·3), Hissar (31·8), Gujrát (30·8) and the districts of the Lahore Division where it varied between 30·9 and 38·6. With the exception of Hissar, and of Kángra, Miánwáli and Muzaffargarh where the high rate is ascribed to the presence of malarial fevers in an epidemic form, all these districts had a lower death-rate than in the previous year. Fever was responsible for the increase in Hissar and for increases in seven other districts.

335. For towns as a whole the death-rate was 4·7 higher than in rural areas. Among larger towns Amritsar had the highest rate—39·94—though this was lower than the rate of the previous year. On the other hand in Lahore and Multán, though mortality was not so high as in Amritsar, the rates were in excess of those both of the previous year and of the quinquennium. Of smaller towns Gojra, with a death-rate of only 3·14 *per mille* was again the healthiest, but at the other end of the scale were rates of over 60 *per mille* in Begowála, Karor and Kila Didár Singh and the excessively high rate of 72·58 in Mukerian.

336. The unhealthiest months were October, November and December, the malarial season, when the death-rate varied between 3·01 and 3·45 *per mille*. March and July were the healthiest months and were closely followed by February, April and June.

Infant mortality.

337. The figures with regard to infant mortality are not so satisfactory as those of the preceding year, chiefly owing to the prevalence of malaria. Calculated on the number of births during the year the death-rate among male infants amounted to 201·79 *per mille* and among female infants to 198·47 *per mille*. In the Simla District the corresponding rates were much in excess of the provincial average, amounting to 335 for male and 311·3 for female infants.

Cholera.

338. After three years of severe prevalence (five to thirteen thousand deaths annually) cholera showed itself in a milder form in most parts of the province except in the towns of Pánipat, Gujránwála and Ferozepore where outbreaks accounted for 165, 83 and 79 deaths respectively. The total number of deaths registered in all districts amounted to 1,651, as compared with 13,196 in 1915. The ratio *per mille* of population was 0·09 or 0·59 less than the rate for the previous year and 0·21 below the quinquennial average. The district of Karnál in which 197 deaths were recorded headed the list. Siálkot followed with 186, Ferozepore 166, Gujránwála 164, Ludhiána 151, Lahore 122, Lyallpur 104, Gujrát 103 and Gurgáon 100. In Amritsar, Jullundur, Ambála and Rohtak 93, 66, 59 and 37 deaths occurred respectively. In seven others the disease did not assume a virulent form and the number of deaths registered did not exceed 19. In the districts of Multán, Muzaffargarh and Shahpur the mortality from cholera did not exceed 6, while in Simla only one death was reported. No deaths from cholera occurred in Jhelum, Attock, Montgomery and Dera Gházi Khan Districts. Out of a total of 159 towns and 33,110 villages only 48 towns (including 11 in which one death each occurred) and 201 villages were infected, as compared with 69 and 1,678, respectively, in the year preceding. Cholera was more prevalent in towns than in villages this year, and the infection was at its highest during August and September.

Small-pox.

339. The number of deaths registered in 1916, as due to small-pox, was 2,886, or 0·15 *per mille*, of the population. This rate though 0·66 lower than the mean rate of the preceding quinquennium, was 0·06 more than the rate for 1915. The excess is possibly due to some extent to misclassification : measles (*choti mata*) was very prevalent during the year and many deaths from this cause may have been registered under the head of *bari mata* (small-pox) owing to incorrect diagnosis or to the ignorance of the people. The average death-rate (0·15) from small-pox was the same for towns as for rural circles, but for towns in which the Compulsory Vaccination Act is in force it was 0·14, as compared with 0·18 for those to which the provisions of the Act have not been extended. The rate of mortality from small-pox was greatest among children from one to five years of age. The female rate was lower than the male rate under every age group except between 10 and 20. This increase is possibly the result of the difficulty with which the parents or guardians of girls of this age can be persuaded to submit them to re-vaccination.

Plague

340. There were altogether 4,151 deaths in the Punjab from plague in the year under report—3,325 in British districts and 826 in Native States—as compared with 244,104 deaths in 1915. This is the mildest visitation experienced in the Province since the disease made its first appearance. For 3 weeks in July, the whole Punjab was declared free of plague for the first time in 20 years. Only 5 districts had the disease in the true epidemic form, and of these Ambála and Ráwalpindi were the most severely infected. The districts of Hissar, Ambála, Gurdáspur and Ráwalpindi, which had a legacy of plague from the previous year, were the worst infected. There were 12 districts scattered all over the province where the disease appeared only sporadically. The municipalities of Lahore and Amritsar and the districts of Simla, Multán, Muzaffargarh, Miánwáli and Dera Ghazi Khan were entirely plague-free and Kángra, Gujrát, Jhelum, Lyallpur, Shahpur and Attock had only imported cases. There was the usual rise in March and April, but Ráwalpindi exceptionally showed an increase in October and November. In spite of the abnormal rainfall there were only three districts, Ambála, Ludhiana and Gurdáspur, in addition to Ráwalpindi, which were infected at the end of the year.

341. All the usual methods for combating plague were employed during the year, and in addition experiments were made with Barium Carbonate as a rat poison. The new poison proved deadly to rats, while

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innocuous to dogs, fowls and other domestic animals. The preparation of baits with this poison is also simple and considerably cheaper than that previously in use.

Fevers.

342. There were 376,003 deaths recorded as due to fevers during the year under report. This shows an increase of 91,219 deaths on the previous year when the number was 284,784. The fever death-rate works out at 19·44 *per mille* of population as compared with 14·73 in the preceding year and 15·79 for the quinquennium. The urban and rural death-rates from fevers were 14·87 and 19·90, respectively, as compared with 13·32 and 14·87 in the previous year and 14·48 and 15·99 for the quinquennium.

49.—Emigration and Immigration.

343. There is nothing to report under this head.

50.—Medical Relief.

General.

344. The Medical Department continued to be handicapped by the absence of many of its officers on military duty. During the year 38 more Sub-Assistant Surgeons and 53 Assistant Surgeons were deputed to service under the Army Department. The response made to the appeal for Civil Assistant Surgeons for military duty outside India was most gratifying, but that of Sub-Assistant Surgeons, despite the substantial concessions offered them, was exceedingly poor. The Province furnished a valuable contribution to the military needs of the Empire by supplying 226 trained dressers for service with the army. The Punjab Medical Registration Act was passed in March 1916. It is a measure of very considerable importance to the medical profession in the Province and is welcomed by all who have the interests and welfare of that profession at heart.

Dispensaries.

345. War conditions continued to hamper the provision of additional facilities for medical relief, the net increase during the year in the number of dispensaries being only 5. The number open at the end of 1915 was 473; 13 were opened in 1916, and 8 closed, leaving a total of 478 at the close of the year, each serving on an average 41,800 persons. The total at the close of the previous triennium ending 1913 was 467. The number of dispensaries is clearly insufficient and it is estimated that at least 93 more are required to provide even one dispensary for every 35,000 persons.

Patients.

346. There was an increase by 275,991 in the total number of patients treated in general hospitals and dispensaries during the year, the number being 5,051,811 as against 4,775,820 during 1915. In-patients numbered 94,285 and out-patients 4,957,526, the former showing an increase of 4,375 and the latter one of 271,616 on the figures of the preceding year. The increase in out-patients is largely to be ascribed to the prevalence of malaria during the year, 200,000 more malaria cases having been treated than in 1915. The rates of deaths per cent. of in-patients which was 2·31 in 1914 and 2·27 in 1915, fell still further to 2·08. The number of beds was 4,625, of which 2,852 were for males and 1,773 for females. The number has been increased by 500 during the triennium but is still obviously inadequate.

347. The following abstract shows the number of cases of the most important diseases treated during the year, the figures for 1915 being included for purposes of comparison :— Statistics of diseases.

	1915.	*1916.*
Cholera	1,458	558
Dysentery	61,875	74,313
Malaria	464,486	658,461
Rheumatic fever and rheumatism ...	88,696	85,023
Small-pox	93	141
Tubercle of the lung...	4,658	4,681
Other tubercular diseases	5,419	5,377
Diseases of the eye	989,436	1,092,543
Dyspepsia	192,757	202,596
Diarrhœa	52,443	59,859
All other diseases of the digestive system ...	516,592	537,668

348. The increased prevalence of malaria has been noted above and is to be attributed to an unusually heavy monsoon. On the first sign of the occurrence of cases, itinerating dispensaries were sent out to all known malarious tracts and a liberal supply of quinine was provided throughout the Province. A scheme for the quininization of school children was not a success. The local authorities who participated in it, did not comply with the instructions and had no quinine and registers ready when the time came to use them. Steps have been taken to ensure that this does not occur again.

349. The number of surgical operations performed during the year (266,475) though slightly greater than that of 1914 (260,775) did not come up to the 1915 figures (275,506). The decrease is, however, entirely due to a falling off in minor operations. The number of major operations rose from 40,399 to 40,642. The death-rate among patients operated on, ·20 per cent., was the same as in the two preceding years. The percentage of successful cataract operations was the same as in 1915, namely 95 per cent. Operations for stone in the bladder increased again from 2,308 in 1915 to 2,328. Surgery.

350. With an opening cash balance of Rs. 1,55,011, the total income of the Department in the year amounted to Rs. 16,43,273, or an increase of Rs. 63,280 over the income for 1915. Government contributions fell by Rs. 16,069, but contributions from local bodies rose by Rs. 20,730. Subscriptions from Europeans fell from Rs. 47,337 to Rs. 45,625 but those from Indians rose from Rs. 35,501 to Rs. 40,072. Expenditure increased from Rs. 14 lakhs to just over Rs. 15 lakhs and the Department was left with a closing balance of Rs. 1,39,360. The income would be considerably higher if local bodies insisted on payment of fees by the well-to-do for medicines, consultations and operations. The system is in force in all districts but is largely inoperative owing to the luke-warm support given by members of local boards and committees. Income and expenditure.

351. The extension of the Mayo Hospital is steadily approaching completion. The various operation theatres and the Medical, Surgical and Gynæcological out-patient departments were finished and taken over. The septic block, Nurses' Home, steam laundry, hospital kitchens and disinfecting and sterilizing plants were also completed and brought into use. The total number of cases treated was 37,989 as compared with 34,443 in 1915. In this hospital 100 beds were reserved for sick and wounded soldiers from overseas, while 80 beds at Jullundur, 50 at Karnál and 100 at Amritsar were provided for the same purpose. The Mayo Hospital.

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Treatment of Women.

352. The efforts which are being made to provide for the treatment of women are shown by the gradual increase in the number of female in-patients from 28,948 in 1913 to an average of 30,997 (7 per cent.) in the last three years, and in the rise from 5,966 to 6,330 on the daily average number of women (excluding female children) treated as out-patients. The total number of women treated as in-door and out-door patients rose from 1,027,739 in 1915 to 1,090,180 during the year under report. Three medical women of the first grade, four Assistant Surgeons, one certificated practitioner, and sixteen Sub-Assistant Surgeons were employed in the district female hospitals. A scheme is now under consideration for the provincialisation of the female Sub-Assistant Surgeons' service on the lines of the existing service for male Sub-Assistant Surgeons, but on a more liberal scale.

Malaria Investigation.

353. Two members of the staff obtained temporary commissions in the I.M.S. and research-work in the laboratory was considerably affected. The malaria surveys of Thánesar, Montgomery, Miánwáli, Gujránwála and Lyallpur were completed, and surveys were undertaken of the towns of Gohána and Khángarh where malaria is markedly endemic. Visits to localities in the Salt Range failed to throw light on the reason for the presence there of high spleen and parasite rates in the absence of anopheles larvæ. The problem is under consideration. Observations taken in certain ponds at Lahore and elsewhere tended to throw doubt on the supposed usefulness of fish and waterfowl in the destruction of these larvæ.

Punjab Lunatic Asylum.

354. The number of patients admitted to the Punjab Lunatic Asylum during the year was 329, a figure which again exceeded all previous records. The daily average population (831) was also largely in excess of that of the previous year, though there was a considerable increase in the number of patients discharged as cured. The congestion of accommodation in the male asylum has now been relieved by the provision of an extra block of 20 cubicles and the question of extending the asylum premises is under consideration. The year was on the whole a healthy one and the daily average of sick was much below that of the previous year, though in the latter part of the year malaria was responsible for a considerable amount of illness.

The Pasteur Institute, Kasauli.

355. There was a slight increase from 1,134 to 1,147 in the number of persons from the Punjab treated for rabies at the Pasteur Institute at Kasauli. Of these 73 were Europeans and 1,074 Indians. As the provincial laboratory of the Punjab the Institute was also called upon to examine and report on 988 cases as compared with 820 cases in the previous year.

51.—Sanitation.

Sanitary Board.

356. The Sanitary Board met 4 times during the year.

Grants by Government.

357. There was no balance left from the sum of 8 lakhs placed at the disposal of the Board in 1915-16 as the unexpended balance was withdrawn by Government. A fresh grant of 3 lakhs was placed at the disposal of the Sanitary Board for allotment during 1916-17 and from this grants-in-aid aggregating Rs. 2,60,232 were made between 1st April and 31st December 1916 leaving a balance of Rs. 39,765 which will be accounted for in the next year's report. The whole of the grant for 1916-17, including a lakh which in addition was afterwards placed at the disposal of the Board, was fully utilized; Rs. 3,53,881 were distributed in

aid of urban drainage and water supply-schemes and Rs. 46,119 for rural sanitation and a grant of Rs. 20,500 was made to the Society for Promoting Scientific Knowledge.

Urban and rural sanitation schemes.

358. The Board accorded administrative sanction to schemes for repairs to wells in the Lyallpur District, and for repairs to *ghâts* at Thánesar, and to the Ambála water-works extension scheme. They also accorded revised administrative sanction to drainage schemes for Rúpar, *Eminábad, Majítha,* Sultánwind and Kálka. Government sanctioned the *Rohtak* drainage scheme at an estimated cost of Rs. 1,72,831 and also accorded revised administrative sanction to the Lyallpur water-supply extension scheme at a revised estimate of Rs. 1,55,530. The Núrpur fair area and Rewári water-supply schemes and the Multán, Gurdáspur, Eminábad and Rúpar drainage schemes, after approval by the Board received technical sanction from Government in the Public Works Department. Revised technical sanction was accorded to the Lyallpur water-supply extension scheme at a cost of Rs. 1,55,530 and to the Lála Musa and Majítha drainage schemes at Rs. 23,817 and Rs. 14,706 respectively.

Utilisation of refuse and sewage.

359. The income derived from the sale of street sweepings in municipal towns during the year under report amounted to Rs. 1,40,854 as against Rs 1,28,286 realized in the previous year. The largest sums were realized in Amritsar, Lahore and Siálkot. There were 1,326 acres of land under sewage irrigation in the principal towns and Rs. 36,597 were realized for its use. There was a decrease of 516 acres of land irrigated but an increase of Rs. 2,941 in the amount realized.

Attitude of the people.

360. Attempts to improve village sanitation have met with but little real success. The rewards offered by the Gurgáon District Board were again not distributed and the like fate met similar efforts made by the Hissar Board. Sites near villages are invariably in a filthy condition, and manure and dung is stacked in the vicinity of dwelling houses and drinking wells. An epidemic of cholera or plague or a visit by a touring officer will effect a temporary improvement, but soon afterwards matters revert to their normal condition. Some progress is, however, reported from the Ambála, Siálkot, Jhang and Gurdáspur Districts, while the scheme for the sanitary improvement of larger villages, started by the District Board, Karnál, in 1914, is said to be working satisfactorily.

Fairs.

361. The medical and sanitary arrangements at the Pehowa fair in the Karnál District at the end of March were supervised by the Additional Deputy Sanitary Commissioner, who remained there throughout the fair. The usual precautions were taken and everything went off satisfactorily. The number attending the fair was estimated at about 60,000. The same officer also supervised the sanitary arrangements at the Bába Farid fair at Pákpattan, which was, however, not largely attended. The Additional Deputy Sanitary Commissioner with the Civil Surgeon, Gurdáspur, were present during the Nankána Sáhib fair in November. Between 70,000 and 80,000 pilgrims attended, of whom about 45,000 came by rail. The health of the camp was excellent and no cholera or other disease of an infectious nature was reported.

52.—Vaccination.

Vaccination.

362. The number of persons vaccinated during the year was 899,652 or about 52,000 more than in the previous year. There was an increase of about 5 per cent. in the number of primary operations performed and of 10 per cent. in the number of re-vaccinations, but the percentage of cases in which operations were successful was slightly lower than in the previous year and the number of cases in which results could not be ascertained was somewhat higher. During the year the Vaccination Act was extended to fourteen municipalities and is now in force in about 70

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per cent. of the towns to which it is applicable. In such towns 84 per cent. of the children under one year of age available for vaccination were successfully vaccinated as compared with 59 per cent. in other towns.

363. The cost of the department during the year amounted to Rs. 1,43,174, a slight increase over the figures of the previous year, but the average cost of each successful vaccination, Re. 0-3-1, was the same.

Punjab Vaccine Institute, Lahore.

364. The Vaccine Institute issued 42,438 tubes of vaccine as against 33,894 in 1915-16, the increase being due mainly to the larger number of tubes issued to the military authorities and for use outside the province. The number of vaccinators employed was 275 and of these 74 attended the courses of instruction in the technique of vaccination, elementary principles of hygiene, duties of vaccinators, etc., held at the Institute during the year.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this chapter will be found in the report and statistical tables noted below :—

PROVINCIAL REPORT.

Education—(1) Report on the Progress of Education during the quinquennium ending 1916-17.

(2) Report on the operations of the Department of Agriculture, Punjab, for the year ending 30th June 1917.

(3) Annual Report on the Punjab Veterinary College and the Civil Veterinary Department, Punjab, for the year 1916-17.

Arts and Sciences—Report on the working of the Lahore Museum for the year 1916-17.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press—Statistics of British India, Volume V, Education. Statistical Abstract for British India, Volume IV, Administrative, Judicial and Local Self-Government.

53.—General System of Public Instruction.

[*Vide* pages 173-184 of the Administration Report for 1911-12.]

54.—Education.

GENERAL SUMMARY.

365. The number of public educational institutions rose by 186, the increase being mostly in the number of primary schools. The number of scholars increased by 18,090 or 1,886 more than the increase in 1915-16. The total expenditure decreased by a little more than 3½ lakhs of rupees, being Rs. 1,08,63,320 against Rs. 1,12,16,765 in the previous year. This is due to the fact that the Imperial non-recurring grants were entirely expended by the year 1915-16 and the recurring grants were absorbed into the annual recurring expenditure of the department by the end of that year. The expenditure of Local Boards on Public Instruction diminished by Rs. 2,47,014 to Rs. 25,40,260; while that of the Municipal Boards rose by Rs. 43,519 to Rs. 6,42,964.

366. Cooking and laundry work for girls have found a place in the scheme of general education. The posts of six Medical Inspectors of Schools were made permanent. Manual training was introduced in a few High Schools. The total number of scholarships rose from 2,404 to 2,670. Classes for teaching First Aid, &c., were opened in several schools.

367. The rapid increase of late years in the number of secondary schools has entailed much additional work on the senior inspecting staff, and, owing to the press of inspection work, the administrative and supervisory duties of Inspectors have suffered considerably. Two Inspectors in the Provincial Educational Service, Khan Bahadur Maulvi Umr-ud-din and Rai Sahib Lala Jugal Kishor retired during the year under report.

368. The efforts of private individuals and bodies in the cause of education were as a rule confined to the sphere of high school education. The Sikh community showed the highest percentage of increase in all branches of general education.

COLLEGIATE EDUCATION.

369. The number of Arts Colleges for men rose from 9 to 10 by the addition of the Sanatan Dharm College at Lahore, which may relieve, to some extent, the congestion in the older local institutions. The number

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of students increased by 341 to 4,214, the most noticeable increases being at the Khalsa College (83), and the Dayal Singh College (74). The expenditure on tuition increased by Rs. 59,785; the additional income from fees was Rs. 78,311, the extra burden on Provincial Revenues being only Rs. 6,551.

370. The Khalsa College students' Co-operative Society is unique of its kind in the Punjab. The members club together to purchase not only books and school equipment, but also milk and other food, at little over wholesale rates. A valuable development of College life is the social service movement among students. Most of the colleges have now arranged for the systematic medical examination of their students, and a satisfactory feature of Collegiate Education is the preference shown by the student population for residence in hostels.

371. The work of the Government College has never reached a higher level than at the close of the year 1916-17, during which 7 candidates obtained first class honours in the M.Sc. examination, and the percentage of passes in all University examinations rose to the unprecedented figure of 72. The Punjab University had drafted before the close of the year regulations for a Faculty and a Degree in Agriculture.

Secondary Education (Boys).

372. The number of secondary schools rose by 9 to 422, of which 136 were high schools, 135 anglo-vernacular middle and 151 vernacular middle schools. The number of pupils rose by 4,151. The addition of six anglo-vernacular high schools is chiefly due to private enterprise.

373. The total direct expenditure on secondary education for boys during 1916-17 was Rs. 28,23,739. About one-half of the cost is met from the fee income, about one-eighth from private sources and the remaining three-eighths from public funds.

374. The number of trained teachers increased by 356 (more than 9 per cent.) to 3,806. The buildings of three Government High Schools and one hostel were completed during the year. The Ahirs and Bhargawas of Rewári, the Rajputs of Ambála and the Sikhs of Rúpar have established denominational hostels and there are half a dozen hostels of this kind in the Lyallpur District.

375. The Medical Inspectors of secondary schools have been transferred to military duty and there is little likelihood of their places being filled during the continuance of the war. The new scheme of physical exercises based on scientific principles has been introduced in those schools which have instructors capable of putting it into effect. Hygiene and Agriculture have grown in popularity, and the number of candidates taking up these subjects in the Matriculation examination of 1917 was 434 and 464, respectively.

376. Teachers have invested largely in the war loan and the parents of many Central Model schoolboys have bought postal certificates for their sons by monthly payments.

Primary Education (Boys).

377. The total number of primary schools for boys at the close of 1916-17 was 4,918 with an attendance of 244,796 scholars, 161 new schools having been opened during the year, and the number of pupils increased by 10,604. The numbers of board schools and aided schools have risen by 109 and 87, respectively, while that of unaided schools has fallen by 35.

378. The total direct expenditure on primary schools was Rs. 15,67,402 or about Rs. 60,000 more than in 1915-16. Most of this expenditure was met as usual from Local Fund allotments, including, of course, provincial grants.

379. Of the 9,868 Primary teachers at the close of the year, no less than 5,150 were trained and certificated. Though the quality of instruction has improved in consequence of an increase in the proportion of trained teachers, nature study, mensuration and land records are badly taught. The teaching of geography and Urdu composition is far from intelligent and many teachers are themselves ignorant of native accounts which they are supposed to teach.

The Training of Teachers.

380. In addition to the 10th Government Normal School at Gurdáspur, some training classes for students of an inferior standard have been opened at a number of centres to supply local and immediate needs. The work of the Normal School for Women at Lahore has been supplemented by the opening of several local training classes in 1916.

381. The total number of persons under training was 1,183 men and 263 women against 1,271 men and 267 women in the preceding year. The number of students in the Training Colleges fell from 311 to 272 and in the Normal School for Women from 101 to 80; but a satisfactory feature is the rise in the number of Sikh and Muhammadan women attending training schools, the figures being 28 and 61 against 17 and 49, respectively, in the previous year. The Normal Schools for men show a rise of 69.

382. The expenditure on the Central Training College, a little more than a lakh of rupees, has slightly decreased. There were 194 applicants for admission to the B.T. class. Of the 48 students selected, 2 were M.Sc.'s, 3 M.A.'s, 1 B.Sc., 5 B.A.'s with Honours, and 37 B.A.'s, 20 of whom had served as teachers and were recommended by Inspectors. All the 85 students of the Senior Vernacular Class had passed the Junior Vernacular Certificate examination in the first division. In the Kinnaird College for women, 10 women students were undergoing a course of training as English teachers.

Professional, Technical and Special Education.

383. The number of industrial schools, 30, remained as before. Proposals for the reform of these schools are under the consideration of Government. Some industrial schools for girls are maintained by Missions, the most important being that recently opened at Clarkabad with an average attendance of 174 pupils who learn *Kashida*, flour grinding, *nala* and *newar*-making, sewing and spinning.

384. The staff of the Law College has been further strengthened and two branch hostels opened; 285 students appeared at the examinations of 1917, of whom 181 (including 65 L.L.B.'s) were successful.

385. The number of students on the roll of the Medical College is 232 against 176 in the previous year. In order to admit the 90 new military medical pupils required by the Army Department, the number of ordinary pupils had to be cut down, no admission being given to candidates from Native States or Municipalities.

386. Eighty-five students were admitted into the Veterinary College in the year and the class of candidates was above the average. Of the new students 26 were from the Indian Army and the Imperial Service Troops, 12 from other provinces, 5 from Native States and 32 from the Punjab.

387. As the result of a resolution of the Agricultural Conference held at Pusa in February 1916, it was decided to apply for the affiliation of the Lyallpur Agricultural College to the Punjab University. A four-year course leading to a degree of B.Sc. (Agriculture) has been drawn up and affiliation has been granted since the close of the year. It is hoped to develop the educational utility of the College by opening a class for the training of teachers in agriculture.

388. The Government School of Engineering, Rasul, continues to do good work. The disinclination of students for manual labour is steadily disappearing. Of the 43 students who passed out last year, 33 obtained employment in the Public Works Department, 2 in the Military Works Department and 3 in the Bahawalpur State service.

389. In the Mayo School of Art, the training of drawing masters has been considerably improved. The work of some departments, for instance that of photography, has been recently handicapped by the cost of materials, but in other respects, a high standard is maintained, especially in the department of advanced cabinet making and joinery.

390. Thirty ex-students of the Victoria Diamond Jubilee Hindu Technical Institute, an aided institution, have been assisting in the manufacture of munitions in return for a bare living wage and one without any remuneration at all.

391. The attendance in the Railway Technical School fell from 421 to 395, owing to the recruitment of artisans for war work. The staff has been strengthened by the appointment of a machine instructor, an engine driver, a tin and coppersmith and a moulder.

392. There was a falling off in the number of admissions to the Reformatory School, Delhi, and the number of boys in residence was 112 against 141 in the preceding year. The blacksmith's shop is engaged on work for the Red Cross Society.

393. The Government Commercial School at Amritsar having proved unsuccessful was attached at the close of the year to the Government High School at that place, where it is hoped it will enjoy a new lease of life.

Education of Indian Women.

394. The number of institutions rose from 971 to 990 and that of scholars from 49,367 to 51,496. There are now 8 High and 49 Middle Schools for Indian girls in the Province, but the proportion of those who go beyond the Lower Primary stage is still very low. Professional men are more inclined to marry their sons to educated girls, and education is consequently beginning to be valued by parents as improving the marriage prospects of their daughters. Indian ladies at present take no part in the management of girls' schools maintained by private bodies. District Inspectresses have been employed by 5 boards and Lady Superintendents for town schools by 5 municipalities. Two candidates were successful in the B.A. examination this year, 8 in the F.A. and 34 at Matriculation.

Education of Europeans.

395. The number of institutions increased from 36 to 38 and that of scholars from 2,753 to 3,001. The expenditure was Rs. 10,77,303 against Rs. 10,92,606 in the previous year. Imperial and Provincial Revenues contributed about half. The building of the Ghora Gali Boys' School, was completed this year, and is a very imposing structure with accommodation for two hundred boarders. In the Lawrence Military Asylum, the boys' school staff has been seriously weakened by the claims of the army, but efficiency is nevertheless maintained.

Education of Special Classes.

Muhammadan Education.

396. The total male population of the Punjab was at the 1911 Census just under eleven millions, of whom some six millions were Muhammadans. The total number of Muhammadan scholars in the Province was 144,844 against 163,339 Hindus and 50,761 Sikhs. Muhammadans now constitute 42·9 per cent. of the total number of scholars at primary schools, Hindus and Sikhs 55·8 per cent. In secondary schools the proportion of Muhammadans is still smaller. In the Medical

College, the number of Muhammadan students has remained stationary but the proportion when compared with the number of students belonging to other communities has declined. On the other hand, the Muhammadan element has considerably increased in the Agricultural College, Lyallpur, and the Muhammadans form the bulk of students in the Veterinary College, the Mayo School of Art, and the various Industrial Schools in the Province. In the degree examinations of 1917, out of 737 candidates only 120 were Muhammadans. Of 3,526 boys who passed Matriculation only 849 were Muhammadans and of 2,109 successful candidates at the Vernacular Final Examination, only 723 belonged to this community.

397. The Education Department has made constant efforts in the past to attract Muhammadans, but against the counter-attractions offered by other branches of Government service the success achieved hitherto has not been remarkable. The special grant of Rs. 30,000 a year given for the Islamia College, Lahore, by the Government of India for 3 years in 1913 has since been renewed.

Jains.

398. Out of 152,646 Hindus in public institutions, 1,648 were Jains.

The Upper Classes.

399. Considerable advance has been made in the teaching of Science, Geography and Mathematics at the Aitchison College, Lahore. As many as 17 old boys are or have been on active service at the various theatres of war. A system of regular monthly subscriptions to war funds has been initiated.

Low Castes and Criminal Tribes.

400. The movement for the education of low caste children is apparently gaining strength, chiefly through the exertions of Christian Missions and the Arya Samaj. A beginning has also been made by some of the local bodies. Efforts have been made for the reclamation of criminal tribes through education by the establishment of schools by the Ludhiana and Sialkot District Boards and by the Salvation Army.

MISCELLANEOUS.

The Punjab Text Book Committee.

401. Five hundred books were examined during the year. The committee's own publications number 177 at present, and the year's output was 963,500 volumes. The philanthropic work of presenting books to schools continued as usual and an award of Rs. 1,200 was given to seven deserving authors out of the Patronage of Literature Fund on the committee's recommendations. The committee is composed at present of seven Europeans, eight Hindus, six Muhammadans and three Sikhs under the presidency of the Director of Public Instruction. Complaints against the decisions of the committee are very rare and the Education Department is able to trust to its verdict in the matter of text books. The committee also sees that text books are sold at reasonable prices, thus safeguarding the interests of pupils.

Students' Advisory Committee.

402. The Secretary reports that in spite of the war, the number of enquirers has increased and reached 608 in the year under report, of whom 105 were interviewed.

55.—Literature and the Press.

LITERATURE.

403. In spite of the high price of paper, the number of original publications did not perceptibly fall; that of re-publications rose by 45. The total number of books and periodicals published in 1916 was 1,745 as against 1,721 in 1915. Urdu and Punjabi with 660 and 543 publications respectively, headed the list as before. They were followed by English, which, however, compared unfavourably with the production of the previous year. The number of Arabic and Sindhi publications almost doubled.

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404. Poetry and Religion continued to claim the largest number. Books on electric light and wiring, cotton-dyeing, woollen and silk stuffs and architecture were the first of their kind in the vernacular. Strictly biographical works, dramatic plays based on the lives of great men, a few Urdu books on 'Medicine' of a modern type, military hand-books on physical training for the Indian Army in Urdu, Hindi and Punjabi, and Professor Atma Ram's collection of essays on scientific subjects in Urdu may be specially mentioned. Very many of the poetical publications were trash, a number being more or less obscene. Books on religion were in some cases of an offensive character and likely to widen the gulf between different communities or sub-divisions of communities. A marked improvement in their style was, however, noticeable.

405. On the whole the year's literature showed perceptible development in many directions and there was a distinct improvement in the quality of works of Fiction, Drama, Poetry, and Religion and children's stories.

PRESS.

Newspapers.

406. The total number of newspapers and periodicals of all kinds published in the Punjab during the whole or part of the year was 261. The figure for the preceding 12 months was 264. There were 211 papers and periodicals in existence at the end of the year as against 193 in existence at the close of 1915. Sixty-eight periodical publications were started during the year and 50 ceased to exist during the same period.

407. Of the 261 newspapers and periodicals, 167 were in Urdu, 59 in English, 4 in Gurmukhi, 9 in Hindi, 1 in English and Roman-Urdu and 1 in Urdu-Hindi. The number of daily papers was 19, weekly 69 and monthly 137. The remaining papers appeared at irregular intervals. Of the 19 daily papers, 5 were in English and the remaining 14 in Urdu, 5 represented the Hindu and 7 the Muhammadan community; 2 were more or less neutral.

408. One hundred and forty-eight newspapers and periodicals were published in Lahore and 37 in Amritsar. The other centres of activity were Simla (16), Gurdáspur District (10), Siálkot and Ráwalpindi (7 each) Ferozepore (5), Gujránwála and Jullundur (4 each) and Ludhiána (3).

Circulation.

409. The total circulation per issue of all papers was, as far as could be ascertained, about 270,000 as compared with about 284,000 in 1915 and 308,000 in 1914 The following were the more important papers in the province :—

English.

1. *Bulletin* (Hindu, daily).
2. *Tribune* (Hindu, daily).
3. *Punjabee* (Hindu, daily).
4. *Khalsa Advocate* (Sikh, weekly).
5. *Observer* (Muhammadan, bi-weekly).

Vernacular.

(*a*) *Urdu.*

6. *Hindustan* (Hindu, weekly).
7. *Paisa Akhbar* (Muhammadan, weekly).
8. **Zamindar* (Muhammadan, daily).
9. *Parkash* (Arya, weekly).
10. *Urdu Bulletin* (Hindu, daily).

* Has since ceased to exist.

11. *Loyal Gazette* (Sikh, weekly).
12. **Zamindar* (Muhammadan, weekly).
13. *Arya Gazette* (Arya, weekly).
14. *Rajput Gazette* (Hindu, weekly).
15. **Lama'āt* (Muhammadan, daily).
16. *Fakil* (Muhammadan, bi-weekly).
17. *Himala* (Hindu, weekly).
18. *Paisa Akhbar* (Muhammadan, daily).
19. *Munir* (Muhammadan, weekly).
20. *Shanti* (Arya, weekly).
21. *Desh* (Hindu, daily).
22. *Public* (Hindu, daily).
23. *Ahl-i-Hadis* (Muhammadan, weekly).
24. *Watan* (Muhammadan, weekly.)
25. *Akhbar-i-'Am* (Hindu, weekly).
26. **Kisan* (Muhammadan, daily).
27. *Khalsa Akhbar* (Sikh, weekly).
28. **Al-Asar* (Muhammadan, daily).
29. *Sanatan Dharm Parcharak* (Hindu, weekly).
30. *Kashmiri Magazine* (Muhammadan, weekly).
31. †*Jhang Sial* (Hindu, weekly).

(b) Gurmukhi.

32. *Khalsa Samachar* (Sikh, weekly).

410. Of these the circulation of No. 6 was claimed to be above 9,000; of No. 7 above 6,000; of Nos. 8, 9, and 10 above 4,000; of Nos. 11 and 12 between 3,000 and 3,500; of Nos. 1, 2, 13, 14 and 15 between 2,000 and 2,900; of Nos 16 to 26 (inclusive) above 1,000; and of the rest between 700 and 1,000. The decrease in the circulation of newspapers is to be attributed to the increased cost of paper and printing requirements.

411. The total number of declarations filed during the year under sections 4 and 5 of Act XXV of 1867 was 267 : 57 Presses being declared or re-declared under section 4, and 210 newspapers under section 5. Security was demanded on 24 occasions : in 19 cases by the District Magistrate originally or by varying a previous order. Of these one demand was due to the publication of objectionable articles. In five cases security was demanded by the Local Government under section 3 (2) or section 8 (2) for articles coming within the definition of section 4 of the Press Act. Executive action.

412. Action under the Defence of India (Consolidation) Rules, 1915, was taken on four occasions against papers within the province, the *Zamindar* and the *Lama'āt* only being concerned. The entry of the *Tarjuman*, the *Iqdam* and the *Risalat* into the Punjab was also forbidden under the rules.

413. Formal warnings were administered through District Magistrates to newspapers and periodicals, as follows :—

(a) Seven for publishing articles open to objection on political grounds.

* Has since ceased to exist.

† Now called Virat.

(*b*) Two for writings calculated to arouse sectarian ill-feeling or religious animosity.

(*c*) Three for publishing obscene matter.

In each case the presses concerned were also warned.

414. Four provincial publications were proscribed under section 12 of the Indian Press Act, 1910, as being calculated to bring into hatred and contempt certain classes of His Majesty's subjects in British India. Three more, the contents of which were open to objection on various grounds, were withdrawn by the publishers from circulation to avoid prosecution, and two were amended before being allowed to be published. None of these requires particular notice except perhaps the Urdu translation of Nicolai Manucci's *Storia do Mogor*, the four bulky volumes of which were entirely re-edited to meet the complaints of Muhammadan critics.

415. Five printing presses were warned for printing books and pamphlets of an objectionable character. Thirteen newspapers and periodicals and 12 printing presses were formally warned for failure to comply with the provisions of section 3, Act XXV of 1867, and since the close of the year a formal warning has been given to every Press in the province. A fine of Rs. 250 was inflicted under section 292, Indian Penal Code, in the case of an obscene book entitled *Aql-o-Sha'ūr*. The printer concerned was discharged for want of evidence. This was the only prosecution under that section in 1916 as against 19 in the previous year.

56.—Literary Societies.

[*Vide* pages 196 and 197 of the Administration Report for the year 1911-12.]

57.—Arts and Sciences.

The Lahore Museum.

416. There was a slight decrease to 357,481 in the number of persons who visited the Lahore Central Museum during the year, but the attendance on "Zenana days" which fell off considerably in 1915-16 improved from 5,224 to 5,680. The usual course of lectures was delivered but the attendance averaged only 153 as compared with 187 in the previous year.

417. Expenditure on the Museum fell from Rs. 11,173 to Rs. 9,584 and practically no funds were available for purchase of new objects. Nevertheless an interesting drawing in the style of the famous Riza School of Persia was acquired, and Dr. Vogel presented to the Museum three terra cotta Buddhist images secured in Tibet.

418. All the galleries were opened to the public during the year, except the new gallery which is used for storing Sir Aurel Stein's collections. The compound of the Museum and of the neighbouring Mayo School of Art has been greatly improved by the removal of a large number of old ill-shaped trees. A sum of over Rs. 2,000 was spent on providing new wall cases which were much needed.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1917, and in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1916-17.

58.—Archæology.

Hindu and Buddhist Monuments.

419. During the year expenditure on the preservation of Hindu and Buddhist monuments in the Punjab amounted to Rs. 3,088 8-2. Of this sum Rs. 1,022-8-0 were devoted to the execution of annual repairs of a petty nature, while the remainder was spent on special repairs on the great Tope at Manikyála in the Ráwalpindi District, the Kángra Fort and the Baijnáth temple at Baijnáth. The conservation of the Manikyála Tope is not yet completed, for though the missing portions of the drum have been reconstructed, the overhanging portion of the core on the north side has yet to be underpinned, and arrangements for the proper drainage of the area around the monument have to be made. The underpinning operations will involve considerable labour, as the core of the structure is composed of large blocks of *kanjur* stone and new blocks of the same kind will have to be especially quarried for the purpose. The cost of these repairs is estimated at Rs. 8,627. A further improvement contemplated is the substitution of capitals of a more suitable design for those restored in the drum of the Stupa in 1891. At the rock-cut temples of Masrúr in the Kángra District, the excavations carried out in 1915-16 have revealed the necessity of further repairs, estimated to cost Rs. 7,758. The work carried out at the Kángra Fort consisted of structural repairs to the archway and jambs of the main gateway and the grouting of cracks.

420. The excavations at Taxila were continued under the personal supervision of the Director-General of Archæology in India. Among other ancient city-sites in the province that call for exploration are the ruins near Harapa in the Montgomery District and Sunet in the Ludhiána District. An outstanding feature of the discoveries so far made at Harapa consists in about half a dozen tablets inscribed in an unknown script, and it is expected that systematic excavations will bring to light further material of this kind, which might furnish a key to the decipherment of these curious characters and throw light on the past history of the site. The remains at Sunet continue to reveal ancient coins and inscribed votive tablets. Some of the latter supply the names of what must have been Brahmanical temples dedicated to Sankara and Narayana, also called Sthanu and Bhagavat in other tablets from the same site. The remains at Harapa are being surveyed and their notification under the Ancient Monuments Preservation Act is in contemplation.

Muhammadan and British Monuments.

421. During the year Rs. 14,061 were spent on the maintenance and annual repairs of Muhammadan and British monuments and Rs. 15,315 on special repairs. Small repairs were effected of the dome of the tomb at Lahore of Ali Mardan Khan, a celebrated Persian architect of Shah Jahan who is believed to have been largely instrumental in introducing the bulbous Tartar dome into general use in Indian architecture. The improvement of the road front of the Shálámár Gardens near Lahore has been completed at a cost of Rs. 2,970, and a scheme has been adopted for laying out the

ARCHÆOLOGY.

middle terrace about the central tank in these gardens as a rose garden, the formal Moghal treatment of the lay-out being preserved by the planting of a number of small *asoka* trees symmetrically in the angles of the plots.

422. Urgent works, on which Rs. 13,600 were spent during the year, were undertaken at Sheikhúpura with a view to the conservation of the great tank and of the *Haran Minár*. A ruined *ghât* on the south side was repaired and the extensive parapet surrounding the tank, which had subsided in many places, was put in order. The great *minár* at this place is said to have been erected by Jahangir as a memorial to his favourite antelope. In the Anarkali Bazar at Lahore, the restoration of the grave believed to be that of Qutb-ud-din Aibak, Sultan of Delhi, who met his death at Lahore playing polo in 1210 A. D., was carried to completion.

423. The excavation of the buried galleries along the east wall of the fort at Hissar was proceeded with. A considerable portion of the building has been cleared, and it is possible readily to follow the arrangement of the *dáláns* about their central courts. On the opposite side of the roadway into the fort the area immediately about the *lát-ki-musjid* has been cleared down to about 20 feet below the existing ground level, and the battered walls of the lower storey have been exposed.

CHAPTER IX.

MISCELLANEOUS.

59.—Ecclesiastical Jurisdiction.

[For this section reference should be made to pages 201—207 of the Punjab Administration Report for the year 1911-12.]

60.—Ecclesiastical.

424. During the year three new Chaplains of the Church of England and one of the Church of Scotland were appointed to the Bengal (Lahore) Ecclesiastical establishment. The Bishop of Lahore was granted leave and the Archdeacon of Lahore was appointed to act as his Commissary. Several Chaplains were again deputed for service with the troops in Mesopotamia. Establishments were sanctioned for the new garrison church at Balun, Dalhousie, and for the cemeteries at Cliffden and Lower Topa in the Murree Hills and at Pákpattan in the Montgomery District.

61.—Stationery.

425. The value of stationery issued to offices was Rs. 71,367 and to presses Rs. 1,80,186, making a total of Rs. 2,51,553 as compared with Rs. 2,71,395 in the previous year. This reduction, amounting to over 7 per cent., was due to the measures taken to enforce strict economy in the use of paper and was effected in spite of the appreciable rise in the cost of paper. The total expenditure was Rs. 55,493, or over 18 per cent., less than the budget allotment.

62.—Punjab Government Press.

426. Though the receipts from the sale of gazettes and other Government publications were slightly greater than in 1915-16, other press receipts decreased by about Rs. 1,800. Expenditure, however, also fell by over Rs. 2,700, and though the value of the printing work turned out was over Rs. 4,200 less than in the previous year, the decrease in expenditure was most satisfactory in view of the largely enhanced cost of paper and other materials consumed in the Press and of the fact that the freight on all paper used was paid by the Press and not as hitherto by the departments supplied. The sum paid to contractors for form work amounted to only Rs. 35,983 or about Rs. 3,000 less than in 1915-16.

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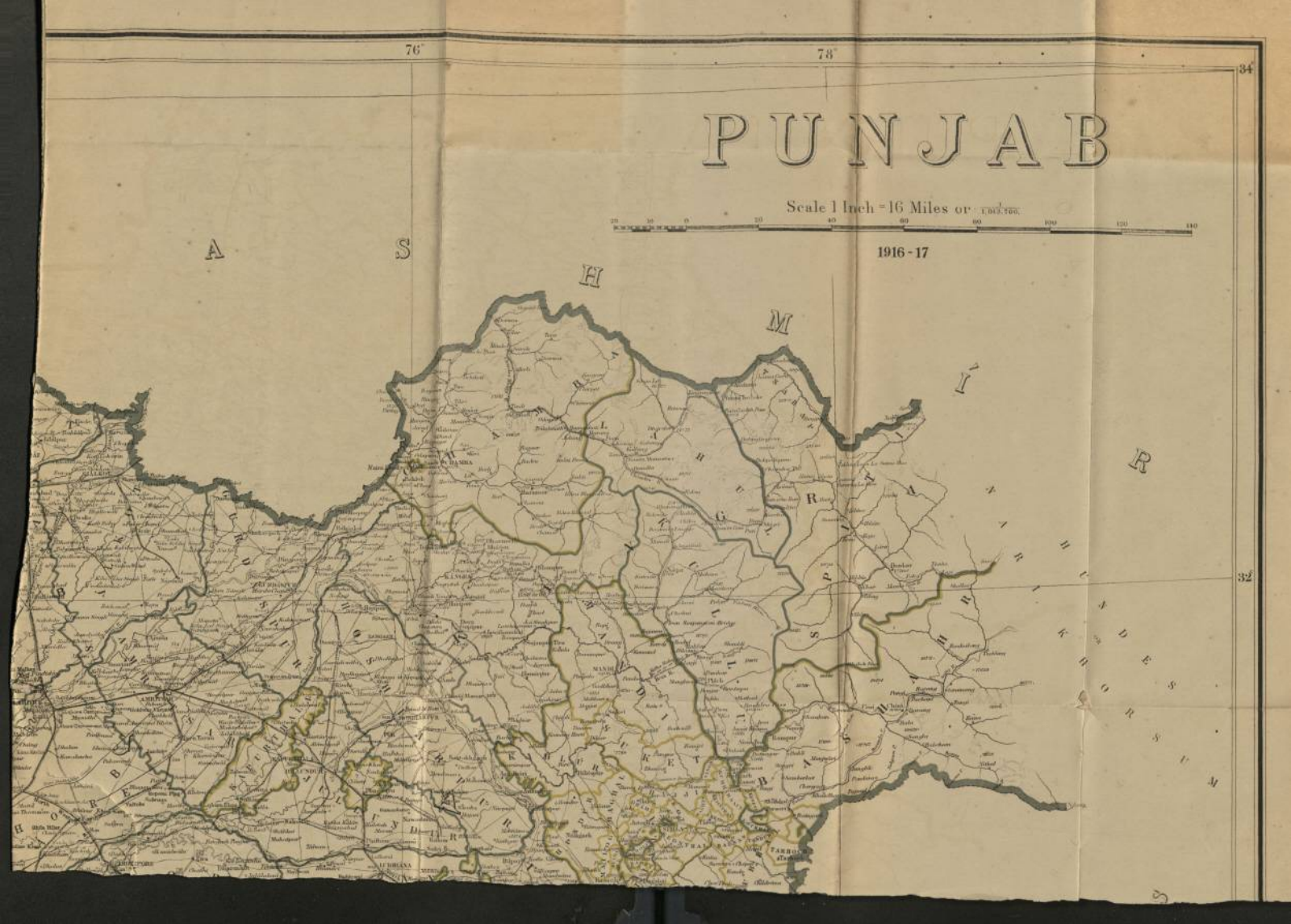
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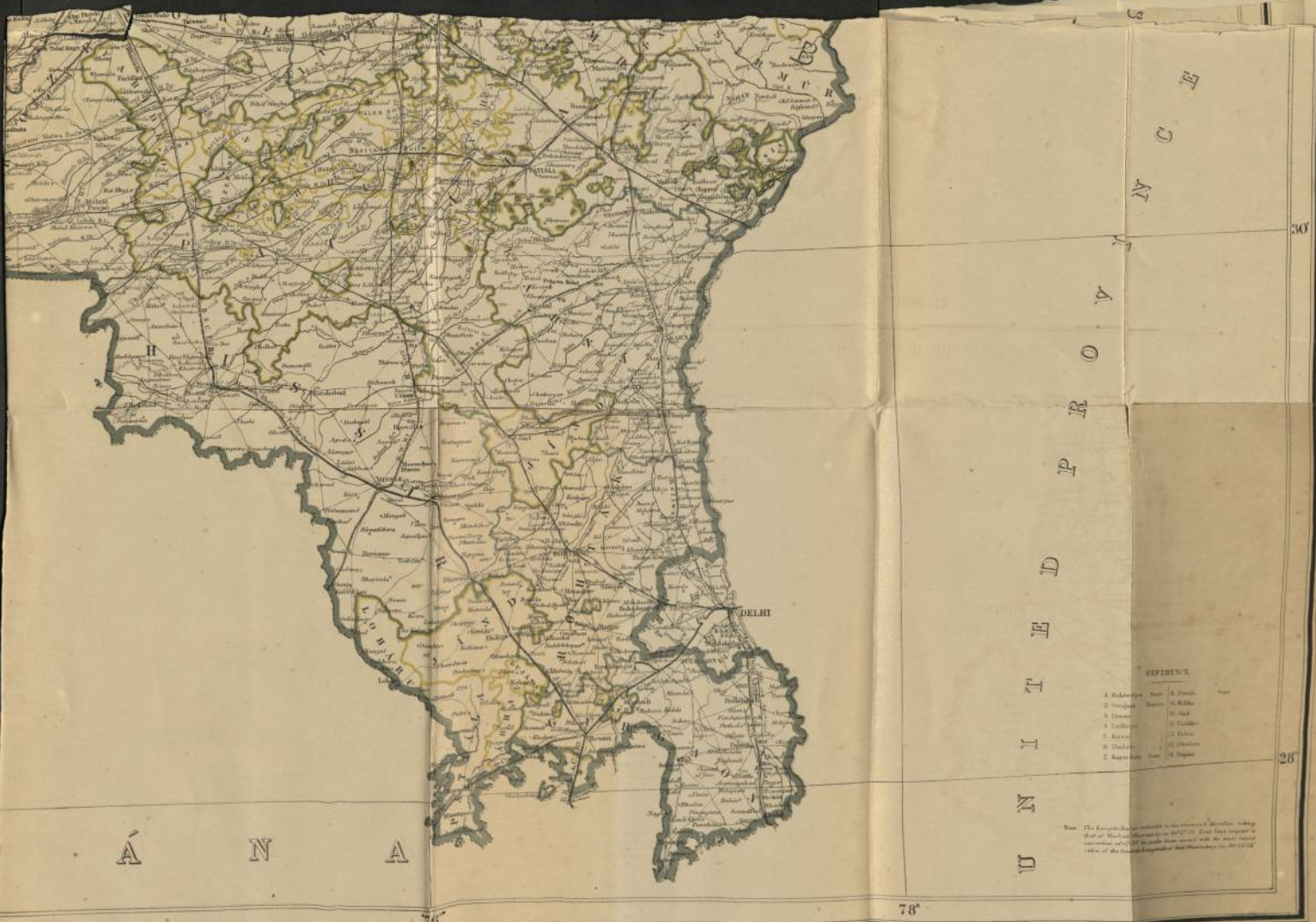
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1918-19.

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1918-19.

Lahore:
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB
1920.

[NOTE.—The General Summary is limited to between 20 and 30 pages and the Departmental Chapters to 150 pages.]

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REPORT

ON THE

ADMINISTRATION

OF THE

PUNJAB AND ITS DEPENDENCIES

FOR

1918-19.

PART I.

GENERAL SUMMARY.

(The "year" throughout this report is not invariably the financial year ending 31st March 1919. At the heading of each chapter, with the exception of Chapter I, a reference is given to the departmental reports which contain details of the subject dealt with. The "year" of the present report is for each such subject the year mentioned in the title of the departmental report so referred to. In general, it may be said that the "year" in Chapters I, IV, V, VII, VIII and IX means the financial year ending 31st March 1919, in Chapter II it is the revenue year ending 30th September 1918, and in Chapters III and VI it is the calendar year ending 31st December 1918.

The Administration Report for 1911-12 was a decennial report, and as such contained many sections of permanent interest to which reference may be necessary in order to understand the working of the Administration; under the orders of the Government of India these sections are not repeated each year, but a reference is given to them in their place in the several chapters of part II of this report.

Except where otherwise stated, the Punjab in this report refers to the Punjab as at present constituted.)

Lieutenant-Governor.

SIR M. F. O'DWYER, G.C.I.E., K.C.S.I.

The War.

1. Although the month of November happily saw the cessation of hostilities, the war overshadowed all other interests during the first six months of the year 1918-19, and must consequently be assigned a prominent place in any review of the year's working despite the fact that the subject has been exhaustively discussed in the past. It is perhaps too early to estimate at its true value the part played by this Province, but it is safe to affirm that, as compared with the rest of India, the Punjab as a whole has emerged from the searching test with enhanced reputation and prestige. The kindly historian will have little difficulty in glossing over the few weak spots; the severest critic will be obliged to admit that the good far outweighs

the bad. The Punjabi peasant in particular, in all save a very few districts, has reason to be proud of his record, and has once more demonstrated his right to be considered the backbone of the Province.

2. During the first three years of the war no fewer than one-quarter of a million combatants had answered the call for men. Nevertheless when a further and more urgent appeal was received the Lieutenant-Governor had no hesitation in asking for a further instalment of 180,000 combatants within a year. Doubts were freely expressed as to the ability of the Province to furnish so large an additional *quota*, but the figure was justified by the results. In spite of the serious epidemic of influenza, which for some weeks paralysed all forms of activity, well over 92,000 men had joined the colours in the five months of the recruiting campaign, and had the enemy not collapsed there is every probability that the full number would have been obtained. In any case the Province can claim to have supplied more than half the total raised in the Indian Empire. Regarded in terms of comparative population the result is not one of which the Punjab need feel ashamed.

3. Of the combatants the Muhammadans comprising $\frac{5}{9}$ths of the population furnished 48 per cent., while Hindus and Sikhs, the former with $\frac{3}{9}$ths and the latter with $\frac{1}{9}$th of the population, are each credited with about 25 per cent. If allowance be made for the fact that the Hindus reside in cities and towns to a much greater extent than the Sikhs the disparity between these two communities is considerably lessened, and it may be said that the rural Hindus made a fair response to the call. The townspeople on the other hand, though forming about $\frac{1}{10}$th of the population of the Province, contributed very little to the recruiting record.

4. It is, however, not only in the matter of men that the Punjab stands prominent in India. Dependent mainly on agriculture, its wealth as compared with that of the great trading centres, is inconsiderable. Yet it succeeded by dint of whole-hearted effort in securing for itself a most honorable place among contributors, whether in respect of the War Loans, or in connection with the various funds established with the view of assisting directly or indirectly those engaged in active service. While the results achieved were in large measure due to the widespread desire evinced by the villagers to take their full share of the burden, it is pleasing to note that many of the wealthier townspeople came forward with generous subscriptions.

Security.

5. The military force operating from Dera Ghazi Khan against the rebellious Marri and Khetran tribes in the Baluchistan Agency was withdrawn in May 1918, and during the rest of the year the frontier situation was normal.

6. Apart from the very serious disturbances which occurred in April 1919 and which consequently do not come within the scope of this report, the internal conditions in respect of crime were not unsatisfactory. Although there was a slight increase over last year's total in the number of cognisable cases, the figures compare very favourably with those of preceding years and there was a decrease in the more violent

forms of crime such as murders, robberies and riots. The conditions in the latter part of the year were calculated to stimulate certain forms of crime. The high prices of necessaries caused some distress among the more poorly paid classes. On the other hand, the scarcity of fodder is reported to have had a restraining influence on cattle thieves.

7. There were a few instances of defiance of constituted authority, but generally speaking the behaviour of the Province was good and war activities were loyally supported. The effects of influenza were seen in the falling-off in convictions and the longer duration of cases. The Village Patrol Act and the Restriction of Habitual Offenders Act have both begun to prove their usefulness. Under the latter Act the absentee himself is liable to punishment, whereas previously the only man who suffered was the headman who had failed to prevent or report the absence.

8. Steady progress continues to be recorded in connection with the reformation of the criminal tribes. Conditions in the original settlements have been materially improved and the inmates are becoming more reconciled to the restraint which is naturally irksome to persons who have inherited the traditions and propensities of a nomadic life. A marked advance has been achieved in respect of the elementary education and discipline of the children in the settlements, while the year has seen a satisfactory rise in the wage-earning capacity of the inmates.

9. A remarkable feature of the year's working among the criminal tribes has been the success attained in regard to recruiting. When the armistice rendered further operations unnecessary, the number of criminal tribesmen in the army exceeded 2,000, nearly two-thirds of whom had enlisted for active service. Having regard to the fact that the recruits were derived from a population naturally averse to honest labour and impatient of discipline, the figures are impressive and every effort will be made to maintain the army connection.

10. Many of the settlements are now controlled by non-official societies whose members in not a few cases take a real interest in the work. It is also encouraging to find that various Native States are now beginning to tackle the problem of their criminal tribes and Patiala has decided to establish within its borders two industrial settlements.

Condition of the people.

11. The spring crops of 1918 were unusually good, but the general scantiness of the subsequent monsoon caused the almost complete failure of the autumn harvest, except in the case of cotton grown on irrigated lands. The virulent epidemic of influenza which raged during October and November interfered seriously with sowings for the spring harvest of 1919 and a greatly restricted area of unirrigated land was cultivated. Despite the lowness of the rivers, however, an extra half million acres were sown on canal lands and timely rains in January and February appreciably improved the position.

12. When the failure of the monsoon was established export of food-grains, except for troops in Mesopotamia and East Africa, was prohibited. Stocks prior to the last harvest were at a low ebb, and it

was essential that a sufficient supply of food should be retained for the use of the Province. Prices stood at a very high level, and, notwithstanding the prohibition of export, the efforts of profiteers and the holding up of stocks prevented any substantial reduction. The policy of requisitioning stocks at reasonable rates was put in force, but the system met with only partial success. House-to-house visitation was hardly practicable and holders refrained from sending stocks to markets where they might be requisitioned. In addition the practice of despatching grain by road rather than rail and thereby evading export restrictions received an undesirable stimulus. Eventually it was decided that the great difficulties in the way of taking over all stocks of any importance would have to be faced, but fortunately before action was taken the promise of the spring harvest and the fears of large imports from Australia led to an improvement in the situation and the ordinary laws of supply and demand were able to re-assert themselves.

13. While the range of high prices pressed severely on Government servants and persons on fixed incomes, the agricultural community and the trading classes both enjoyed a prosperous year. The former had no difficulty in disposing of all their produce at rates which yielded them very handsome returns, while the latter were able to turn the conditions of the year to their own advantage. Proof of these statements is to be found in the fact that the price of land again showed a very substantial rise and despite large sales of holdings to Government tenants at rates much below the market value, the average sale figure over the whole Province represents 171 years' purchase of the land revenue assessed. Income-tax returns also showed increased prosperity, though owing to radical changes in procedure a large proportion of the demand was not recovered before the close of the year. The labouring classes benefited by the strong demand for workmen of all kinds and were able to secure wages more or less commensurate with the rise in prices. They were also assisted indirectly as regards clothing by the large orders placed in Bombay for supplies of standard cloth.

Finance.

14. The cessation of hostilities occurred well on in the financial year and had little immediate effect on the funds. The closing balance was Rs. 36 lakhs better than that of the previous year. Receipts were Rs. 32½ lakhs and expenditure Rs. 58 lakhs above last year's figures. Excise and Irrigation, Major Works, were the chief contributors to the improvement in income, while Public Works and Education together accounted for 24 lakhs of the extra disbursements. Prices remained at a very high level throughout the year and wages reached a record figure. Government was thereby involved in large expenditure on grain compensation allowance plus a special war allowance to Government servants drawing Rs. 50 or less per month. A good autumn harvest would undoubtedly have eased the situation but unfortunately owing to the failure of the monsoon the crops were exceptionally poor.

15. Though the Provincial balance is substantial, the future is not without its difficulties. Much leeway due to the war, in respect of communications and sanitation in particular, has to be made up,

while there are large new commitments in connection with education and agriculture. Moreover, the revision of the pay of Government servants will have to be faced, and the introduction of the Reform Scheme must materially add to the cost of the administration. The depletion of the balance will afford only temporary relief, and it seems clear that it will not be long before other measures for meeting the expenditure will have to be considered.

Agriculture and Rural Economics.

16. The autumn harvest of 1918 proved a sad contrast to the spring harvest of that year which was excellent. The scantiness of the monsoon was responsible for the almost total failure of the crops, the only important exception being cotton grown on irrigated lands. Sowings for the spring harvest of 1919 were hampered not only by the influenza epidemic but by the lack of moisture in the ground and much of the unirrigated area was left unsown. Thanks, however, to timely rains in the beginning of that year the irrigated areas turned out well and in certain favoured parts the yield from unirrigated lands approached normal.

17. Whether under the stimulus of the high prices obtainable for all kinds of agricultural produce or merely in the natural course of development, the agriculturist is now evincing a growing interest in the scientific side of his profession. At the Lyallpur Agricultural College, for instance, there was for the first time on record a preponderance of agriculturists among the candidates for admission. More particularly in the cases of cotton and wheat, experiments with different varieties of pure seed are beginning to attract much attention and producers are ready to substitute for the variety in use any form which promises better results. The demonstration farms which are being started in numerous districts will no doubt encourage the movement towards those improved methods of cultivation which have already added appreciably to the yield of the Province. The general outlook in respect of agricultural progress is decidedly hopeful.

18. The demand for improved implements has been checked by the rise in prices, but will probably revive when the new engineering workshop at the Lyallpur College is completed. Well-boring work shows an improvement over the previous year, though the work has been seriously hampered by the despatch of staff and plant to Persia.

19. Increasing interest is being displayed in connection with the betterment of live-stock. Despite difficulties as to fodder the number of stud bulls working in the Province has risen by nearly 14 per cent. and some progress has been made in the direction of the popularizing of three-quarter and half-bred merino rams.

Co-operation.

20. The words 'substantial advance' may be employed to sum up the results of the year's working in respect of the co-operative movement and this despite the fact that development was temporarily checked in the first place by the serious epidemic of influenza and subsequently by the disturbances in the spring of 1919. Generally speaking, there has been an awakening of interest in the movement in tracts

hitherto unstirred, while the number of societies has largely increased, the older associations have gained strength, and several new forms of co-operation have been introduced.

21. Central Credit Societies in this Province may be either Central Banks or Banking Unions. The former, which may now be said to be in a strong financial position, enjoy certain advantages over the Banking Unions in that they have a command of urban capital while their semi-official character engenders confidence. On the other hand, the Banking Union, which is steadily on the increase, represents a more self-reliant and self-governing tendency. Operations being confined to small areas the Unions possess an intimate knowledge of the credit of their members and are more co-operative in spirit. Their growth is a matter of congratulation, and even if areas outside such Unions dwindle away the Central Banks will still be able to play a most important rôle in the financing of the Banking Unions.

22. Primary Agricultural Credit Societies notwithstanding careful pruning have now reached a total of over 5,000 and in general their position is most promising. Fictitious recoveries have almost ceased and loans are distributed with less regard to favouritism. The reduction of debts proceeds apace, while the general adoption of the principle of indivisible profits is likely to hasten the accumulation of resources and thus enable societies to offer more favourable rates for loans.

23. The conditions of the year tended to encourage supply or distribution societies. There is no doubt that such societies do help to checkmate the profiteers to the benefit of the members concerned, but it is difficult to say whether this type of society will persist. So far these societies have been largely dependent on Government assistance and thus lack the real co-operative management. An interesting experiment is the registration of tree-planting societies for the supply of timber and fuel. The enterprise is worthy of imitation, but members must be prepared to look far ahead.

24. Cattle Insurance Societies have made a successful start and the principle of Government assistance to this form of co-operation has been accepted, though the details have not yet been worked out. There is a proposal to form arbitration societies and should it materialize the societies are likely to play an important part in the creation of a Panchayat system, and to exercise a wholesome influence upon the moral as well as the material welfare of the people.

Vital Statistics and Medical Relief.

25. The drier conditions of the year did not favour malaria, and though the birth rate was low—a legacy probably of the severe malaria of the preceding year—the period would have been exceptionally healthy had it not been for the virulent and widespread epidemic of influenza in the late autumn. Owing to this the death rate exceeded all previous records.

26. Influenza is reported to have reached the Punjab in July, but it was not till August that cases were definitely recognised. These cases were all of a mild type. During September the area of infection rapidly extended, and by the end of that month the whole

Province was infected. In spite of this the death rates during August and September were the lowest of the year. In October, however, the character of the disease completely altered and a peculiarly fatal type of pneumonia appeared as a concomitant. The worst period was from 15th October to November 8th, when the state of the Province can only be described as appalling. During November the disease continued to take a heavy toll from the rural population, but began to abate in urban areas. In December the epidemic virtually ceased except in the Kangra District and the remote hill tracts where people were still dying as late as the first week in January. Generally speaking, the rural areas suffered more severely than the towns, partly on account of the greater distance from medical aid and partly from the lack of organisation.

27. Cholera was not an important contributor to the year's mortality, but both plague and small-pox showed increased figures. The epidemic of plague in Multan City was particularly severe, but the measures taken to cope with it were thorough and well organised. The attitude of the people generally in regard to anti-plague precautions is becoming more enlightened, but the spread of sound ideas on the subject will be achieved only by perseverance coupled with great tact and patience on the part of those who are in charge of the preventive measures.

28. With the assistance of a special grant by Government 13 new dispensaries were opened, as compared with 2 closed. Further Government assistance has been promised, one condition laid down being the introduction of the system of charging fees from the well-to-do classes—a system which so far has made little headway. The influenza epidemic called attention to the urgent need for improving the standard of medical aid in rural tracts, and the provision of more dispensaries is obviously one of the means at command. Travelling dispensaries are popular and go some way towards supplying the deficiency, but they are hardly adequate substitutes for permanent institutions.

29. The dearth of qualified medical women still continues, but it is hoped that the scheme for a provincial service which has been sanctioned since the close of the year will assist matters by attracting candidates who can look forward to a secure position and fair prospects. The formation of local committees under the ægis of the Punjab Central Midwives Board at each district headquarters for the training and supervision of indigenous *dais* is likely to mark an important advance in the arduous campaign against the high infantile mortality. The struggle should be further assisted by the passing of the Punjab Adulteration of Food Act, which will enable city supplies of milk to be properly controlled.

Excise.

30. The most striking feature under this head was the unprecedented total recorded under excise receipts, which have much more than doubled during the past ten years. At first sight it might appear that the policy which has been steadily pursued of combining the maximum of taxation with the minimum of consumption has not met with success. But in any comparison with the past allowance must be

made for various increases of duty, the diminished purchasing power of the rupee and the special but probably transitory conditions brought about by the war. In addition there is no doubt that the widespread epidemic of influenza largely contributed to the enhanced consumption of country liquor, the latter being regarded as a valuable prophylactic. In this Province where there is a large but scattered area under sugarcane great care must be exercised lst any measures introduced, far from reducing consumption, merely effect a substitution of illicit products for the more wholesome distillery spirit.

31. The advice of local bodies continues to be widely sought and has proved of value on many points of detail. A further step towards gauging public opinion on questions of Excise policy has been taken in the recent formation of a Standing Committee of the Legislative Council.

32. There has been a marked and satisfactory decrease in the consumption of opium and *charas*. The system under which issues of opium to vendors are restricted to *bonâ fide* requirements calculated on an estimate of the sales in previous years has had a good effect both in reducing consumption and checking smuggling to other Provinces. As *charas* has now been replaced by treasury raw silk and Russian paper money as the medium of exchange in the Yarkand trade it may be possible to effect still further improvements in the figures relating to this deleterious drug.

Trade and Industry.

33. Trade in the Punjab is closely interwoven with agriculture, and during the triennium 1916-17 to 1918-19 agricultural conditions were not markedly favourable, the outturn of crops being slightly below normal. A higher general range of prices, however, more than compensated for any deficiency in yield, and it may safely be affirmed that despite the restrictions on trade the commercial prosperity of the Province successfully survived the war. There is indeed every reason to expect that the restoration of normal conditions will witness substantial devolpments. Exports showed an appreciable increase in volume and a very large rise in value, as compared with the preceding triennium. In respect of volume imports fell off slightly, but in their case also the enhancement in value was considerable. The recovery of a favourable balance of trade and the fact that the gross volume in the period under review surpassed all previous records are sufficient evidence that the restrictions on transport and traffic necessitated by the war and the increase in railway freights have not produced any seriously prejudicial effects. On the export side the main features were the strong demand for cotton at a very high average price and the large consignments of salt and saltpetre, the former in consequence of the shortage elsewhere and the latter in view of war requirements. In respect of imports the enormous absorption of silver coinage furnished the outstanding characteristic.

34. The returns relating to the trans-frontier trade with Afghanistan, Central Asia and Tibet exhibit greatly increased figures, and it is satisfactory to find that the balance of trade is growing steadily in favour of the Punjab. The total value of the trade has risen from

¼ crore in the triennium 1910—13 to nearly 1½ crores. It is not possible at this stage to judge whether the increase will be maintained, as the predominant cause of the betterment is to be found in the diversion of trade from Russia and the neighbouring countries owing to their disturbed condition. The demand for piecegoods in Central Asia, however, has been progressive and may be regarded as permanent. There would appear also to be an excellent market for the cheaper kinds of tea in Tibet, but its development would seem to be dependent on the improvement of the Hindustan-Tibet Road.

35. The total of factories registered under the Act showed a slight increase, due mainly to the opening of new cotton-ginning factories, and although 13 per cent. of the factories were not worked during the year, the average number of operatives rose to a record figure. The management of the factories still leaves much to be desired, and owing to the absence on military duty of the permanent factory inspector evasions of the rules were, it is to be feared, not infrequent.

Local Self-Government.

36. In a Province like the Punjab where such large differences exist between the more advanced and the more backward local bodies generalisations present obvious difficulties. It may, however, be said that the year has been one of steady, if slow, progress throughout the Province. Every effort has been made to foster a sense of responsibility, but there is still far too great a tendency to regard Government as a kind of universal provider expected to produce on demand unlimited supplies of money and other forms of aid. There is excuse for the financial dependence, because the present sources of income are as a rule highly inelastic, while loans have of late years been practically unobtainable. With an improved system of finance and a greater readiness to bear the burden of ordinary work, there appears to be no reason why local self-government should not in time attain a satisfactory standard; good material is not lacking, but before it can be fully utilised, it must rise superior to the idea which is still prevalent that a defeat at an election means disgrace.

37. In the case of municipalities a marked stimulus to election was produced by the introduction of new rules incorporating the system of voting by ballot. In the larger towns the average voter is now beginning to take a more intelligent interest in the privilege he enjoys, but in the smaller areas apathy is still the prevailing atmosphere, except where it is dissipated by the strength of faction feeling or sectarian rivalry. A hopeful sign is the appearance of a better class of candidate, but the feeling alluded to above still deters many of the most suitable citizens from coming forward. A lack of initiative continues to be a prominent defect; possibly the gradual introduction of non-official chairmen and the lessening of official control will provide at least a partial remedy. The growth of the real civic spirit able to rise above self, party or creed must necessarily take time, and all that can be done at present is to assist the development in every possible way.

38. Though the combined income of Municipalities still exceeds the combined expenditure, the financial position is by no means

satisfactory. Income is practically stationary, while schemes involving large expenditure which have been held up owing to restrictions due to the war cannot be postponed indefinitely. It seems clear that new methods of taxation will have to be evolved. A system of loans obviously afford the simplest method of financing the more expensive projects, but loans demand credit, and in nearly every case throughout the Punjab that credit will have to be built up by careful administration and appropriate taxation. The task will not be easy, but the measure of success attained will provide an excellent test by which to estimate the progress of urban local self-government.

39. It is hoped that the new election rules, which will come into force early in 1920, will give an impetus to the elective system in the case of District Boards. The constitution of the boards and the electoral circles have been revised, and polling will take place simultaneously throughout the Province. Despite the lack of popular demand opportunity will also be taken to introduce an elective element in those boards where it does not at present exist. Very few vacancies were contested during the year, but the new arrangements may be the means of awakening more general interest. The distances that members have to cover preclude the holding of any large number of meetings, and the use of properly empowered sub-committees successfully employed during the year in various districts seems deserving of much further extension.

40. Like Municipalties, District Boards are faced with the problem of a rapidly expanding expenditure and an income that is practically fixed. Subsidiary sources of income may be developed, but the raising of the maximum limit of the local rate appears to be almost inevitable.

41. Satisfactory progress has been made in regard to primary education and the adoption by many boards of the 5-year programme prepared by the Education Department will ensure steady and regular growth. The boards are now actively assisting in popularizing more scientific methods of agriculture, and there is ample scope for their energies in this direction. Arboriculture is being slowly recognised as a valuable asset, but there is still a lack of systematic work. Few boards as yet realize their responsibilities in respect of village sanitation; those that do attempt reforms receive little encouragement from the villagers concerned.

Education.

42. The year has been one of exceptional educational activity, marked by a number of important reforms in administration and procedure. The expansion of vernacular education in rural areas and the improvement in the pay of the teaching staff, the passing of the Punjab Primary Education Act, the introduction of agricultural teaching in Middle and High schools, and the revision of the Lower Secondary school courses are among the chief features. The number of educational institutions in the province increased by 125 and the attendance by nearly 11,000. The total expenditure on all kinds of public instruction advanced by more than Rs. 9¼ lakhs to nearly Rs. 1¼ crores, of which more than Rs. 56½ lakhs were contributed directly or indirectly by Government. The proportion of the expenditure derived from fees amounted to 23 per cent.

43. The Punjab Primary Education Act embodies the principle of compulsory education by local option. The conditions of compulsory education described in Part II of the Act come into force only when a local body has agreed by a two-thirds majority to introduce compulsory education in the whole or any part of the area under its control, and even then not until Government has approved of the proposals. The difficulty arising from the remission of fees in the case of children who but for the Act would not have attended school and who enrol themselves in schools under private management, which cannot afford to dispense with the fee income, has been met by a provision that the local body which introduces compulsion shall not only not charge any fees in schools maintained by itself, but shall, if required, pay to the managers the whole or any part of the fees of boys who prefer to attend recognised private schools. Since the close of the year an application for the extension of the Act to the Multan Municipality has been received.

44. In paragraph 31 (Part I) of last year's report reference was made to the preparation of five-year programmes by each district board on the basis of its financial capacity. The survey has now been completed and programmes finally drawn up. Some idea of the scope of this programme will be obtained from the fact that the total recurring charges, which provide for improved pay and prospects for teachers, will in the fifth year exceed Rs. 12 lakhs while the aggregate capital expenditure on equipment and buildings is estimated at over half a crore. Without Government assistance the carrying out of these programmes would have been an impossibility, and a pledge has been given under which Government will meet a fixed proportion of the cost, that proportion being based on the present financial condition and the future prospects of each board; while a special allowance has also been made in the case of districts which have rendered exceptional services during the war. Government has also undertaken to provide half (and in some cases three-fourths) of the expenditure on building and equipment.

45. The attention given to agricultural education is an important feature of the year's progress. In accordance with the Provincial Conferences held to consider this important subject it has been decided that while the practical and technical teaching of agriculture should not be introduced until the secondary stage, nature study should form an essential part of the teaching in primary schools. Students of vernacular Middle schools are drawn largely from the rural classes, and consequently it is in such schools that instruction in agricultural matters can be most profitably imparted. In Anglo-Vernacular Middle schools, on the other hand, a majority of the pupils have no interest in agriculture as a profession, and in their case the conversion of the present science teaching into a course in agricultural science is all that is practicable. In High schools agriculture must necessarily be an optional subject in which theoretical and practical training are equally essential. A grant of Rs. 4,69,000 has been sanctioned from Imperial Revenues to assist the scheme which cannot be introduced in its entirety until the dearth of qualified teachers has been remedied. Arrangements have, however, been made under which selected Junior Anglo-Vernacular teachers will undergo a course of agricultural science at the new Training College at Lyallpur; while the instructors in the

High Department will be graduates of the Agricultural College who have received a training in practical pedagogy.

46. Many difficulties have hitherto attended the progress from primary to secondary education and the relation between the Middle Department and the teaching of English. With a view to overcoming these difficulties a series of changes in the system of education has been introduced. The standard Primary school has been reduced from five to four classes, and where such schools are large and adequately staffed, they will become lower Middle schools by the addition of a fifth and sixth class. Arrangements are also being made for the optional introduction of English in vernacular Middle schools and for the postponement of English in Government and Board schools to the Middle Department.

47. Steady progress continues to be made in other directions. The institution of the Diploma of Commerce by the Punjab University makes special provision for students desirous of entering on a commercial career. A new department was opened in the Mayo School of Arts for the training of architectural draftsmen under the immediate supervision of the Consulting Architect to Government. A school for the training of disabled soldiers in oil engine and motor work was opened in connection with the Railway Technical School. The special grant of three lakhs of rupees made by Government to the Khalsa College, Amritsar, in commemoration of the services rendered by the Sikh community during the war will enable the authorities to complete the College building and undertake various necessary extensions.

48. The demand for the education of girls appears to be gradually increasing and the number of pupils has risen appreciably. The provision of four new normal schools for women should go far towards the removal of difficulties in respect of the supply of trained teachers, but the lack of funds presents a serious obstacle to any large developments in the way of female education.

PART II.

DEPARTMENTAL CHAPTERS.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

1.—Physical Features of the Country, Area, Climate and Chief Staples.

(See pages 1—16 of the report for the year 1911-12.)

2.—Historical Summary.

(See pages 16—30 of the report for the year 1911-12.)

3.—Form of Administration.

(See pages 30—48 of the report for the year 1911-12.)

4.—Character of Land Tenures and System of Surveys and Settlements.

(See pages 48—58 of the report for the year 1911-12 and the Punjab Settlement Manual.)

5.—Civil Divisions of British Territory.

(See pages 59—62 of the report for the year 1911-12.)

6.—Details of the last Census—Tribes and Language.

(See pages 62—71 of the report for the year 1911-12.)

7.—Changes in the Administration.

1. Sir Michael O'Dwyer, G.C.I.E., K.C.S.I., held charge of the office of Lieutenant-Governor of the Punjab throughout the year under report.

2. The appointment of an Inspection Judge every cold weather has come to be regarded as a more or less permanent necessity in view of the continued success of the scheme for the systematic inspection of the subordinate courts in the Punjab, and the appointment was renewed for the cold weather of 1918-19.

3. The close of the year left this Province on the eve of an important change, and the proposal to convert the Chief Court into a High Court, which had been held in abeyance on account of the war, was carried into effect from the 1st April 1919.

8.—Relations with Tributary States and Frontier Affairs.

I.—PHULKIAN STATES.

4. Mr. L. M. Crump, I.C.S., held charge of the Agency throughout the year. The post of Personal Assistant remained vacant.

PATIALA.

Area, 5,412 square miles; population, 1,407,659; approximate revenue, Rs. 110 lakhs; army and police, 5,557; Major-General Maharaja Sir Bhupendra Singh, G.C.I.E., G.B.E., Sidhu Jat; aged 28; has a male heir; salute, 19 guns (including 2 personal).

Personal.

5. His Highness the Maharaja has been in excellent health throughout the year under report. He was invited to the Imperial War Conference as a representative of the Indian States and was appointed Honorary Major-General in the British Army and Honorary Colonel of the 15th Ludhiana Sikhs and of the newly-raised 1-140th Patiala Infantry.

PHYSICAL AND POLITICAL GEOGRAPHY.

During his visit to Europe, His Highness was invested by the King of the Belgians with the Grand Cross of the Order of Leopold and by the President of the French Republic with the Office of the Grand Officer of the Legion of Honour. The King of Italy conferred on him the Order of the Crown of Italy and the Sultan of Egypt decorated him with the Grand Cordon of the Order of the Nile. On his return to India His Highness was presented at Delhi by his brother Princes with a Sword of Honour in commemoration of his valuable services.

The War.

6. The State continued to make its contributions in men, money and material towards the Great War. The total expenditure in the form of aid thus rendered from the commencement of the war up to the end of the year under report amounts as estimated by the Darbar to Rs. 1,17,16,822. The total number of recruits raised in the State for service in the War from its commencement is returned as 28,022. The State continued to maintain one camel corps and 2 mule corps raised in the previous year. Special rewards, khillats and distinctions were granted to the State officials and State subjects by His Highness in recognition of their War services. The fourth War anniversary was celebrated with solemnity and enthusiasm. The day was observed as a public holiday, and prayers were offered for victory of the British arms. The Patiala Imperial Service Infantry and the Patiala Rajinder Lancers returned to Patiala from field service on 27th January 1919 and 11th February 1919, respectively. The days of their return were observed as public holidays in all the local offices, college and schools. On their arrival at the station a procession was formed and, led by His Highness in person, marched through the city towards the Moti Bagh where His Highness suitably acknowledged their services at the front.

Crops and Irrigation.

7. The area of *rabi* sowings was average but the *kharif* crop was very poor and much *barani* land remained unsown owing to the failure of the monsoon. No new irrigation projects could be taken in hand during the year under report owing to extraordinarily heavy war expenditure. General improvements in the existing channels were, however, executed as funds permitted. A scheme for making a dam at Bakhra, high up the Sutlej river, is under the consideration of the British Government. If this should materialise, as is likely, there will probably be increased possibilities of irrigation in the Patiala State.

Public Health.

8. The birth rate for the year (29·95 *per mille*) was distinctly lower than last year (36·2 *per mille*) while the death rate (70·30 *per mille*) was more than double (30·39 *per mille*). The large increase in the death rate was almost entirely due to the influenza epidemic, more than 60,000 deaths being attributed to this disease.

JIND.

Area, 1,259 square miles; population, 271,728; approximate revenue, Rs. 24 lakhs; army and police, 1,815; Lieutenant-Colonel Maharaja Sir Ranbir Singh, G.C.I.E., K.C.S.I., Sidhu Jat; aged 40; salute, 15 guns (including two personal).

Personal.

9. His Highness enjoyed good health during the year under report. He resided throughout the year in the State, except for short visits to Lahore from 9th to 11th January 1919 and to Lahore and Rawalpindi from 26th to 31st March 1919. During the year under report the administration of the State was conducted on the same lines as before. The Lieutenant-Governor paid a visit to the State in February 1919 and attended a Parade and a State Banquet.

The War.

10. The war expenses of this State during the year including Rs. 2½ lakhs invested in the Second Indian War Loan amounted to just under Rs. 7 lakhs. The total War expenditure has now reached the figure of Rs. 32,99,207.

11. The Jind Imperial Service Regiment, which served for 3¼ years in East Africa, earned 47 distinctions including one C.I.E. and one Military Cross.

12. The Darbar persevered in its recruiting efforts. The total number of persons supplied from the State for the Indian Army during the year under report is 741. Adding to this number those serving in the Indian Army at the outbreak of war, *viz.*, 1,712, and those enlisted in the period from the outbreak of war till 31st March 1918, the total contribution of the State to the Indian Army comes to 6,885. Adding the figures of Jind Imperial Service Regiment, *i.e.*, 1,788, the total contribution of manpower by the State amounts to 8,673. As the total male population of the State is 149,947, the State has thus contributed 1 out of every 17 of its male population or 1 out of every 5 of military age. This is a record of which Jind State may well be proud.

13. The absence of rainfall in the month of October and November resulted in the complete failure of *barani* crops. The outturn of canal-irrigated crops was also below normal. Fodder was very scarce and the people had to import fodder from outside. **Crops.**

14. No less than 24,470 deaths were registered as compared with 9,266 births. Influenza claimed about 19,000 victims while an epidemic of small-pox accounted for nearly 500. **Public Health.**

NABHA.

Area, 928 square miles; population, 248,887; approximate revenue, Rs. 19½ lakhs; army and police, 1,532; Maharaja Ripudaman Singh, Sidhu Jat; aged 36; has a male heir; salute, 11 guns.

15. His Highness enjoyed fairly good health. He visited Simla in the summer but could not attend the Chiefs' Conference held at Delhi in January 1919. The system of administration continued as before. **Personal.**

16. The Imperial Service Regiment of State went to Mesopotamia in June 1918 and returned in January 1919. The other war offers made by the Maharaja, and referred to in last year's report, were (1) Rs. 3,00,000 towards the cost of the Expeditionary Force, (2) 100 horses, (3) the use of the State houses in Simla, Lahore and Ambala. His Highness's contributions to objects connected with the War were Rs. 2,25,000 for the Hospitalship "Nabha" for service in Mesopotamia, Rs. 3,70,491 to various War funds and nearly another lakh for armoured aeroplanes and ambulance cars. **The War.**

17. The outturn of crops wasonly moderate, but no suspensions were required. **Crops.**

18. The State enjoyed immunity from cholera and plague, but influenza exacted a heavy toll. Deaths exceeded births by rather over 600. **Public Health**

II.—STATES OF THE BAHAWALPUR AGENCY.

19. Mr. W. C. Renouf, I.C.S., held charge of the Agency during the year.

BAHAWALPUR.

Area, 15,000 square miles; population, 780,641; approximate revenue, Rs. 41 lakhs; army and police, 2,068; Nawab Sadiq Muhammad Khan, Abbasi, V, Daudputra; aged 14; salute, 17 guns.

20. His Highness the Nawab has enjoyed excellent health except for a mild attack of influenza in October 1918, which left no after-effects. His physique has developed very satisfactorily in the last year. His college reports continue to be good. The administration of the State proceeds on sound lines under the Council of Regency. **Personal.**

21. The Imperial Service Camel Corps continue to be efficient. The camel escort which was employed in Egypt with the Alwar Infantry returned in February after 3½ years' service. The Darbar invested a further sum of Rs. 20 lakhs in the Second War Loan. Rupees 30 lakhs of Government Promissory Notes were converted into the War Loan of 1927—1947, the value of the War Bonds thus acquired being Rs. 22,80,000. The Darbar undertook to raise a second Transport Camel Corps and when the armistice was signed, almost half the corps had been organized. Recruiting was prosecuted with energy and with increasing success as the people became accustomed to the idea of military service and by the end of the war 2,829 recruits had been provided. **The War.**

PHYSICAL AND POLITICAL GEOGRAPHY.

Crops. 22. Canals ran badly in a summer of abnormally low rainfall and the *kharif* was consequently much below the average. The *rabi* though on a restricted area was moderate, but fodder was scarce.

Public Health. 23. Plague and influenza account for the fact that there were 17,044 deaths as compared with only 4,620 births.

MALER KOTLA.

Area, 167 square miles; population, 71,144; approximate revenue, Rs. 14 lakhs; army and police, 1,026; Major Nawab Sir Muhammad Ahmad Ali, Khan Bahadur, K.C.S.I., Pathan; aged 38; has a male heir; salute, 11 guns.

Personal. 24. The health of His Highness the Nawab remained good throughout the year. He visited Mashobra as usual during the hot weather.

The War. 25. The first company of the Imperial Service Sappers remained in Mesopotamia doing excellent work and was over strength throughout the year. The reinforcements sent by the second company at headquarters during the year amounted to 48. The 2nd Company also remained over strength. During the year several honours have been earned by officers and men at the front. His Highness continued to evince a very keen interest in his troops. Donations to various war funds amounted to Rs. 11,200 in addition to one lakh of rupees subscribed towards the Second War Loan. Recruiting operations continued successfully; in fact the final proportion of recruits from Maler Kotla to its total male population is the best among the Punjab Native States.

Crops. 26. Both harvests were good on the whole, but the produce of *barani* lands was below the average and owing to heavy floods during the *kharif* in one part of the State a remission of land revenue had to be granted.

Public Health. 27. Owing to the ravages of influenza deaths reached a total of 2,396 as compared with 466 in the preceding year. There was a large decrease in the number of births.

FARIDKOT.

Area, 642 square miles; population, 130,294; approximate revenue, Rs. 13½ lakhs; army and police, 371; Raja Har Indar Singh, Barar Bans, Jat; aged 4; salute, 11 guns.

Personal. 28. The Faridkot State suffered an irreparable loss by the untimely death from influenza and pneumonia on December 23rd, 1918, of Major His Highness Maharaja Brij Indar Singh, Bahadur, at the age of 22. He was a young ruler of very exceptional promise. He took a keen personal interest in the government of his State and administered it with efficiency and success. He has left two sons, Raja Har Indar Singh and the Kanwar Sahib, aged 4 and 3 years, respectively. On the death of the late Maharaja a temporary Council of Administration was established with the approval of the Punjab Government pending orders on proposals regarding permanent arrangements. The work of the temporary Council has been quite satisfactory.

The War. 29. A second company of Imperial Service Sappers was raised by the Darbar at its own expense, but was subsequently disbanded on the cessation of hostilities. His late Highness held three recruiting Darbars with good results. During the year under report the Darbar supplied 952 recruits for the Indian Army and 423 for their own company. It contributed Rs. one lakh towards the purchase of aeroplanes and invested Rs. two lakhs from the State Treasury in the Second War Loan. The people of the State contributed Rs. 4,27,983 to the Second War Loan. The Imperial Service Troops were detailed to garrison duty in Lahore from 14th October 1918 to 5th April 1919. Their work was highly appreciated by the Commander-in-Chief.

Public Health. 30. The State was visited by plague and influenza and the latter was responsible for a very heavy death roll. Births fell from 4,205 to 3,374.

III.—STATES OF THE JULLUNDUR DIVISION.

KAPURTHALA.

Area, 630 square miles; population, 268,133; approximate revenue, Rs. 31 lakhs (inclusive of about Rs. 16 lakhs income from Oudh States); army and police, 2,416; Lieutenant-Colonel Maharaja Sir Jagatjit Singh, Bahadur, G.C.S.I.,

police, 2,416; Lieutenant-Colonel Maharaja Sir Jagatjit Singh, Bahadur, G.C.S.I. Ahluwalia Sikh; aged 46; has a male heir; salute, 15 guns (including 2 personal); tribute, Rs. 1,31,000.

31. The health of His Highness the Maharaja remained good throughout the year. He spent the year in the State, except for a visit to Mussoorie in the hot weather and brief visits to Calcutta and Delhi during the past winter. At Delhi His Highness attended the Chiefs' Conference in January 1919. He has since been on a visit to Europe. In the winter the State was visited by His Excellency the Viceroy and His Honour the Lieutenant-Governor. Personal.

32. In the prosecution of the war the Darbar and its officials have as always displayed readiness to co-operate with the British authorities and have rendered all possible assistance. The number of recruits, who enlisted both for the State Imperial Service Troops and the Indian Army, was nearly 5,000, and the strength of the Imperial Service Infantry was increased from 602 to 1,200. The Darbar granted a life pension to the widows or legitimate heirs of recruits who died on active service. It also adopted the policy of preferential treatment towards relatives of recruits in filling up vacancies in the State. During the year under report the Darbar contributed *inter alia* Rs. 25,000 towards the maintenance of the Hospitalship "Loyalty," and Rs. 25,000 towards the Indian Relief Fund. It also invested Rs. 2,45,000 in the Second Indian War Loan. The War.

33. The epidemic of influenza caused no less than 12,000 deaths, while plague claimed nearly 900 victims. Public Health.

MANDI.

Area, 1,200 square miles; population, 181,110; approximate revenue, Rs. 7 lakhs; army and police, 360; Raja Jogendra Sen, Rajput Mandal; aged 15; salute, 11 guns; tribute, Rs. 1 lakh.

34. His Highness the Raja's health was good throughout the year. He continued his studies at the Aitchison College, Lahore. His progress, both in studies and games, is reported to have been excellent. Personal.

35 The Darbar invested Rs. 50,000 during the year in the Second Indian War Loan. The number of recruits enlisted was 535, as compared with 378 during the previous year. The war.

36. The report of the Superintendent on the year's working is a record of steady progress and improvement on the various branches of administration. The forest settlement has resulted in a considerable enhancement of the income of the State. The first block of the new Kacheri buildings was completed and opened for use during the year. The Darbar has under consideration projects for a water-supply for the city of Mandi and a hydro-electric scheme. Administration.

SUKET.

Area, 420 square miles; population, 54,928; approximate revenue, Rs. 2½ lakhs; army and police, 78; Raja Sir Bhim Sen, K.C.I.E., Rajput; aged 34; has no male heir; salute, 11 guns; tribute, Rs. 11,000.

37. His Highness the Raja spent the year in the State. His health unfortunately was not good and since the year under review ended his life came to a close on the 12th October 1919. Personal.

38. His Highness' offer of 25 mules and Rs. 10,000 towards the expenses of the war was accepted by Government. He contributed Rs. 7,000 towards the Indian Imperial Relief Fund and offered to raise a contingent of 200 men for field service. The War.

IV.—STATES OF THE LAHORE DIVISION.

CHAMBA.

Area, 3,216 square miles; population, 135,873; approximate revenue, Rs. 3,89,000; army and police, 419; Raja Sir Bhure Singh, K.C.S.I., K.C.I.E., Hindu Rajput; has a male heir; aged 49; salute, 11 guns; tribute, Rs. 2,225.

39. His Highness' health during the year was only fairly good. He attended the Conference of Ruling Princes and Chiefs at Delhi in January 1919. The high standard of administration continues to be maintained. Personal.

PHYSICAL AND POLITICAL GEOGRAPHY.

The War.

40. The Raja offered to raise 500 men for the 2/41st Gurkhas and paid to Government Rs. 53,136 towards their maintenance. He also contributed Rs. 10,000 to the Indian Imperial Relief Fund. On the signing of the armistice between the Allies and Germany he offered a lakh of rupees as a special contribution towards the expenses of the war and credited the amount in the Bank of Bengal in March 1919.

NOTE.—It is with much regret that the death of Raja Sir Bhure Singh, which occurred after the close of the year, on the 21st September 1919, has to be recorded.

V.—STATES OF THE AMBALA DIVISION.

SIRMUR (NAHAN).

Area, 1,108 square miles; population, 138,520; approximate revenue, Rs. 6 lakhs: army and police, 633; Lieutenant-Colonel Maharaja Sir Amar Prakash, K.C.S.I., Rajput; aged 30; has a male heir; salute, 11 guns.

Personal.

41. His Highness the Maharaja paid visits to His Excellency the Viceroy and His Honour the Lieutenant-Governor, Punjab, during his stay in Simla in September 1918. In consequence of his being fully occupied with important work in the State he could not attend the Chiefs' Conference at Delhi. His Honour the Lieutenant-Governor of the Punjab and party paid a formal visit to the State during the year under report. The State continues to be administered with efficiency and success.

The War.

42. The State troops, which were all taken prisoners at the fall of Kut-ul-Amara, returned to Nahan after playing a memorable part in the defence of that place. Lieutenant Mayo of the Imperial Service Sappers was a recipient of the highest military distinction, the Victoria Cross, and Lieutenant Dube, Officer Commanding, State Forces, was awarded the First Class of the Order of British India, with the title of Sardar Bahadur.

KALSIA.

Area, 168 square miles; population, 55,909; approximate revenue, Rs. 2,74,000; army and police, 164; Raja Ravi Sher Singh, Jat, Sandhu Sikh; aged 16; has no male heir.

Personal.

43. The Raja has been in good health and spent the hot weather at Mussoorie. He is doing well at the Aitchison College and appeared in the final examination in April 1919. When the Raja, on completion of his education, returns to the State, a suitable building will be erected for his residence at Chachrauli.

Administration.

44. The State continued to be successfully administered by a Council of Regency which has recently been granted special appellate and revisional powers under the Civil and Criminal Procedure Codes and the Land Revenue and Tenancy Acts. The Lieutenant-Governor paid a formal visit to the State during the year.

The War.

45. A contribution of Rs. 2,000 was made towards the Sir Michael O'Dwyer Memorial Fund for soldiers.

PATAUDI.

Area, 53 square miles; population, 19,543; approximate revenue, 1 lakh; army and police, 77; Nawab Muhammad Iftikhar Ali Khan, Bahadur, Afghan; aged 9 years.

Personal.

46. The Nawab, with his mother the Begum, passed the hot weather at Solon. The State continued to be administered by a Council consisting of two members.

The War.

47. The State contributed Rs. 500 to the Sir Michael O'Dwyer Fund.

LOHARU.

Area, 224 square miles; population, 18,587; approximate revenue, Rs. 1,00,684; army and police, 80; Nawab Sir Amir-ud-din Ahmad Khan Bahadur, K.C.I.E., Mughal; aged 59; has a male heir; salute, 9 guns.

Personal.

48. The Nawab carried on the administration with the help of his son and heir, Nawabzada Mirza Aziz-ud-din Ahmad Khan. He visited Mussoorie, Delhi and Quetta during the year under report. He was invited to the Chiefs' Conference at Delhi as a special case in the capacity of representative of the Minor Chiefs of the Punjab. His third son has completed his studies at the Mayo College, Amjer, and has obtained a diploma.

49. The State contributed a sum of Rs. 250 towards the Sir Michael O'Dwyer Memorial Fund.

DUJANA.

Area, 100 square miles; population, 25,485; approximate revenue, Rs. 77,170; army and police, 122; Nawab Muhammad Khurshaid Ali Khan, Bahadur, Pathan; aged 35; has a male heir; tribute, 50 cavalry on requirement.

50. The Nawab lived at Solon during the hot weather and visited Simla for a week. Personal.

VI.—STATES UNDER THE POLITICAL CONTROL OF THE SUPERINTENDENT, HILL STATES, SIMLA.

51. The chief particulars of the Simla Hill States are given in the following table :—

No.	State.	Area in square miles, including feudatories.	Population in 1911.	Approximate revenue.	Tribute.	Name of Chief.	Race.	Age.	Title.	Whether male heir or not.	Military forces and police.	REMARKS.
				Rs.	Rs.							
1	Bilaspur ...	448	93,107	3,33,425	8,000	Sir Bijai Chand, K.C.I.E., C.S.I.	Rajput	46	Raja ...	Yes	204	Permanent salute, 11 guns. Personal salute, 9 guns.
2	Bashahr ...	3,820	88,957	1,44,442	3,945	Padam Singh ...	Do.	45	Do. ...	Yes	13	
3	Nalagarh ...	256	49,230	1,57,460	5,000	Jogindar Singh ...	Do.	49	Do. ...	No	48	Tributaries of Bashahr.
4	Keonthal ...	116	25,354	1,00,971	...	Hamendar Sen ...	Do.	14	Do. ...	No	36	
5	Baghal ...	124	26,008	68,976	3,600	Bikram Singh ...	Do.	26	Do. ...	Yes	25	
6	Bhagat ...	36	8,797	50,000	...	Durga Singh ...	Do.	18	Rana ...	No	43	
7	Jubbal ...	288	23,627	1,98,063	2,520	Bhagat Chand ...	Do.	30	Raja ...	Yes	19	
8	Kumharsain ...	90	12,219	30,000	2,000	Vidyadhar Singh ...	Do.	24	Rana ...	No	7	
9	Bhajji ...	96	14,972	33,504	1,440	Bir Pal ...	Do.	13	Do. ...	No	32	
10	Mailog ...	43	8,663	37,783	1,440	Durga Chand ...	Do.	21	Thakur	No	16	
11	Balsan ...	51	6,225	18,500	1,080	Bir Singh ...	Do.	55	Rana ...	No	...	
12	Dhami ...	26	4,484	30,000	360	Hira Singh, C.I.E. ...	Do.	42	Do. ...	Yes	25	
13	Kothar ...	20	4,016	17,000	1,000	Jagjit Chand ...	Do.	32	Do. ...	Yes	8	
14	Kunihar ...	80	2,208	6,000	180	Hardeo Singh ...	Do.	21	Thakur	No	9	
15	Mangal ...	12	1,267	1,000	72	Tilok Singh ...	Do.	68	Rana ...	Yes	...	
16	Bija ...	4	1,064	5,000	124	Puran Chand ...	Do.	23	Thakur	Yes	8	
17	Darkoti ...	8	521	7,000	...	Raghunath Singh ...	Do.	35	Rana ...	Yes	...	
18	Taroch ...	67	4,493	50,000	288	Surat Singh ...	Do.	32	Thakur	Yes	...	
19	Sangri ...	16	3,022	5,715	...	Hira Singh ...	Do.	68	Rai ...	Yes	...	
20	Kaneti ...	19	2,654	8,590	...	Anog Chand ...	Do.	28	Thakur	No	...	
21	Delath ...	42	1,392	2,743	...	Narindar Singh ...	Do.	69	Do.	Yes	...	
22	Koti ...	50	8,265	44,154	...	Raghbir Chand ...	Do.	59	Rana ...	Yes	56	Tributaries of Keonthal.
23	Theog ...	144	6,345	14,591	...	Padam Chand ...	Do.	33	Thakur	Yes	8	
24	Madhan ...	9	3,901	5,500	...	Randhir Chand ...	Do.	33	Do.	No	6	
25	Ghund ...	28	1,887	5,610	...	Ranjit Singh ...	Do.	36	Do.	Yes	...	Tributaries of Jubbal.
26	Ratesh ...	12	472	700	...	Hira Singh ...	Do.	51	Do.	Yes	...	
27	Rawin ...	7	749	4,591	...	Kidar Singh ...	Do.	42	Do.	Yes	...	
28	Dhadi ...	25	244	1,600	...	Dharm Singh ...	Do.	31	Do.	Yes	...	

PHYSICAL AND POLITICAL GEOGRAPHY.

52. The administration appears to be working smoothly under the new arrangements mentioned in last year's report.

Bilaspur.

53. The State has held its position as the best recruiting area in the Simla Hills. Two lakhs were invested in the Second War Loan.

Bashahr.

54. Raja Padam Singh has carried on the administration successfully with the assistance of his Wazir. The *pseudo* Ran Bahadur Singh, mentioned in last year's report, was convicted in the Raja's court and is now serving a term of imprisonment in the Rampur Jail.

55. The Raja's personal efforts to secure recruits among his subjects brought the number for the year almost up to the total of Bilaspur. He invested Rs. 75,000 in the Second War Loan.

Nalagarh.

56. The unrest in the hill *parganas* came to a head in August 1918, when armed resistance was offered by the disaffected to the action of the Raja's forces in arresting certain ringleaders. A *fracas* took place and the Raja telegraphed for assistance. The Political Assistant Commissioner proceeded to Nalagarh with the Superintendent of the Simla Police, and a force of 50 armed constables. When the expedition reached Nalagarh the rebels were demonstrating in force a few miles away. The State supplied a list of ringleaders and a summons was sent to the rebels to surrender the persons named, about 50 in number. As the first summons was ignored for several days a double company of the 12th Pioneers was despatched from Ambala, but before the troops reached Nalagarh the rebels had shown signs of coming in, and finally the ringleaders surrendered without the necessity arising for active operations. The arrested men were taken to Simla and there placed on trial in the Court of the Superintendent, Hill States. The majority were convicted and sentences were passed ranging from transportation for life downwards, but with a recommendation, which was accepted, that, as an act of clemency, Government should commute the sentences of transportation for life to sentences of ten years' imprisonment.

57. The trial and concurrent enquiries showed that there was much to be remedied in the administration of the State. *Inter alia* the proceedings disclosed the need for a revision of the forest settlement and for a regular settlement of the hill *parganas* which has hitherto never been carried out. The effect of the trial appears to have been to quench all embers of disaffection and normal conditions have been restored.

Keonthal.

58. Raja Hamendra Sen was installed on the *gaddi* on the 6th February 1919. The Raja continues to attend the Aitchison College at Lahore.

Baghal.

59. The disaffection in Nalagarh spread into Baghal, but took a much milder form. In September several persons were placed on their trial in the Court of the Political Assistant Commissioner and most of them were convicted. The two ringleaders received sentences of 3 and 2½ years' imprisonment. The disaffection appears to have died a natural death and normal conditions have been re-established.

60. The elder Manswali Rani, whose younger sister's death was reported last year, died a few months after her sister.

61. Tika Surendra Singh was sent to the Boys' Preparatory School attached to the Queen Mary's College in May 1918.

62. On the 23rd January 1919, the Manager of the State, Rai Bahadur Mian Durga Singh, died at his home at Kot Khai while on short leave. He was a member of the family of the Rana of Kot Khai and had an exceptionally long period of service in the Simla Hill States. It has been difficult to find a successor with similar experience and knowledge of the State.

Baghat.

63. Rana Durga Singh was in his last year at the Chiefs' College and the State continue to be administered by his uncle, Rai Sahib Kanwar Amar Singh.

Jubbal.

64. The Raja continued his generous subscriptions to war charities and invested two lakhs in the Second War Loan.

65. The Rana has been acting as Manager of his State since September 1917 and has conducted the administration with success. He exerted himself to secure recruits, and before activities ceased had made a start in what was somewhat unpromising ground. **Kumharsain.**

66. An heir was born to the Rana on the last day of the year, under report, but has since died.

67. The Council continues to administer the State on somewhat antiquated lines, but the people appear contented. Bhajji is now the only State of any importance which has had no regular settlement. **Bhajji.**

68. Thakur Durga Chand was installed on the *gaddi* on the 16th January 1919, but the State is still temporarily under management. The present Manager is doing well. A sister of the Chief was married to Rao Krishan Pal Singh, Taluqdar of Awagarh, on March 4th, 1919. **Mallog.**

69. The unrest in Nalagarh and Arki was felt to a lesser degree in Kuthar, but the Chief acted promptly, punished the ringleaders and stamped out the disaffection. **Kuthar.**

70. The Chief continues to do well and is consolidating his position. **Kunihar.**

71. The Thakur seems to be making some progress—the present Manager, M. Salig Ram, is doing well. **Beja.**

72. Thakur Ram Saran Singh died on 24th September 1918 and the succession of his son, Raghunath Singh, has been approved. The installation took place in November 1919. **Darkoti.**

73. The Thakur of Taroch has invested Rs. 50,000 in the Second War Loan. **Taroch.**

74. Orders have been passed by Government in the case of the assessment of the Mashobra and Mahasu estates. The lessees will now feel that their position has been assured and ample revenues are at the same time secured to the Chief. **Koti.**

75. There was a spasmodic attempt at disturbance on the part of a section of the subjects of the State in the spring of 1917. Enquiries on the spot brought to light no signs of serious mal-administration and the whole matter appeared to be the work of certain persons with whom the Chief had cause to be seriously displeased The Thakur had the position well in hand from the first and was permitted to settle the matter himself. **Theog.**

76. A sale of deodar trees has paid off all the State's debts and given the Thakur a substantial sum in hand. **Madhan.**

77. The Thakur has sent a donation of Rs. 100 to the Imperial Relief Fund. **Ratesh.**

78. The heir-apparent, aged 12 years, died on 30th December 1918 during the influenza epidemic. The Thakur has several other sons. **Ravin**

79. The influenza epidemic of the autumn of 1918 took its toll in the Simla Hill States. The agency of infection was road transport and mortality along the Hindustan-Tibet Road was very high. The Rampur Fair in the beginning of November was also responsible for spreading the epidemic in the inner hills. **General.**

Frontier Affairs.

80. When the year opened Dera Ghazi Khan was the base of a military force operating against the rebellious Marri and Khetran tribes in the Baluchistan Agency. In May 1918 this force was withdrawn on the successful conclusion of its operations, and the Dera Ghazi Khan frontier soon resumed its normal condition.

81. Some few of the Huddianis, a section of the Laghari tribe, which occupy the territory round about Fort Munro and adjoining the Barkhan Tahsil of the Loralai (Baluchistan) District in which the Khetrans reside, actually joined the Khetran rebellion while others assisted the rebels in their depredations in Punjab territory. These men were tried by the Chiefs' *Jirga* and the leaders received exemplary sentences. A fine of Rs. 4,000 was imposed on the section and has been realized.

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82. The Durkhani section of the Gurchani tribe and the Ghulamani section of the Bozdar tribe were exposed to temptation to join in the rebellion but withstood it. Sirdar Hassan Khan, the *de facto* Chief of the Gurchani tribe, received the title of Khan Bahadur in recognition of the good work done by him in this connection, and both he and Sirdar Paind Khan—who at the time in question was acting Chief of the Bozdar tribe—received a *Khillat* of Rs. 500 from His Honour the Lieutenant-Governor at the Darbar held at Multan on 30th January, 1919. On the same occasion the leading Mukaddams of the above-mentioned sections of the Gurchani and Bozdar tribes also received *Khillats*.

83. The Chiefs' *Jirgas* held at Fort Munro in the summer of 1918 and at Dera Ghazi Khan in the spring of 1919 had very heavy work and got through it in the usual satisfactory way under the experienced and able guidance of the Hon'ble Nawab Sir Behram Khan, Mazari, K.C.I.E.

84. In March 1919 Sardar Ghulam Haider Khan, the titular Chief of the Gurchani tribe, was formally installed as Tumandar, but for sometime to come at any rate the management of the tribe must remain in the hands of his uncle, Khan Bahadur Sardar Hasan Khan.

85. Sardar Muhammad Hussain Khan, Chief of the Bozdar tribe, died on 18th December 1918, and was succeeded by his son, Paind Khan, who for some years has been acting as Chief. Sardar Paind Khan was formally installed in March 1919.

86. Sardar Hamidullah Khan, son of Sirdar Ghulam Haider Khan and nephew of the Mazari Nawab, who had enlisted as a sepoy in the Punjab University Company in March 1917 and was subsequently transferred as an Indian Officer to the 3/124th Baluchistan Infantry, was selected for a temporary King's Commission during the year.

87. The population under the political control of the Punjab Government suffered severely from influenza, and was much affected by the prevailing scarcity and high prices, especially when the Baluchistan authorities stopped the export of grain from the Barkhan Tahsil whence these people had been accustomed from time immemorial to obtain their supplies. After some correspondence with the Baluchistan authorities the export of a limited amount of grain was allowed for the hill population, subject to certain restrictions; in addition *taccavi* to the extent of Rs. 2,500 was distributed to the hill tribes. These measures and the very large purchases of camels, sheep and goats made by Pathan traders this year have enabled the tribesmen to subsist without having resort to theft or raiding to any unusual extent.

9.—Condition of the People.

88. Though plague showed signs of renewed vigour, malaria was much less conspicuous than usual, and the period under review would have been unusually good from the health aspect had it not been for the virulent and widespread epidemic of influenza which raged throughout the Province and resulted in a loss of about three-quarters of a million lives. The birth rate fell from 45·3 to 39·6 *per mille* or 5·6 less than the quinquennial average. The decline may be ascribed partly to the severe outbreak of malarial fever in the late autumn of 1917 and partly to the heavy mortality from influenza among women of child-bearing age. Deaths exceeded births by no less than 41·4 *per mille*, the death rate reaching the record figure of 81 *per mille* for which the influenza scourge is entirely responsible.

89. The spring harvest of 1918 was good, and though the autumn crops proved a failure any deficiency of yield was more than counterbalanced by higher prices. There was a marked and general increase in the price of all staple articles, due in the main to the world-wide conditions resulting from the war. In these circumstances the prosperity of the agricultural classes was fully maintained while the strong demand for labour of all kinds led to substantial increases in wages. Conditions favoured the commercial classes and the only sufferers were those on regular salaries or with fixed incomes.

CHAPTER II.

ADMINISTRATION OF THE LAND.

Detailed information on the subjects dealt with in this Chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Realization of the Revenue—Revenue Surveys and Settlements— } Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1918.

Professional Surveys.—General Report on the Operations of the Survey of India for the year ending 30th September 1918.

Waste Lands and Government Estates.
1. Annual Report on the Punjab Colonies for the year ending 30th September 1918.
2. Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1918.

Wards' Estates.—Report on the Administration of Estates under the Court of Wards in the Punjab for the year ending 30th September 1918.

Revenue and rent-paying classes.—Report on the Land Revenue Administration of the Punjab for the year ending 30th September 1918.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agricultural Statistics of India, Volume I.

Area Totals—Table 1 J.
Classification of Area—Table 2 I.
Incidence of Land Revenue—Table 5 I.
Transfers of Land—Table 6 H.
Changes in Boundaries—Appendix B.

10.—Realization of the Revenue.

FIXED LAND REVENUE.

Demand and Collection.

90. The fixed land revenue demand rose from Rs. 231·52 to Rs. 235·07 lakhs, mainly owing to newly-revised and progressive assessments. Of this 98·4 per cent. was collected, the balance outstanding at the close of the year, apart from amounts remaining under suspension or written off as irrecoverable, being Rs. 18,000. As both harvests were satisfactory the amount of revenue suspended during the year was only Rs. 2·30 lakhs and had it not been for excessive rainfall over certain areas this small sum would have been materially reduced. In the Gurgaon District alone, in addition to a remission of Rs. 19,000, floods necessitated suspensions totalling Rs. 1·75 lakhs. Rohtak and Gurdaspur were the only other districts where any substantial relief in the way of suspensions was required and the total sum under suspension at the close of the year did not exceed Rs. 4·66 lakhs, to which amount the three districts mentioned were the chief contributors.

Riverain action.

91. Owing to the heavy floods alluvion and diluvion operations resulted in a net loss of Rs. 22,200 in the fixed land revenue roll, the total assessable area of the province being reduced by 21,395 acres. The United Provinces lost, however, to Karnal two whole villages and part of a third, the total area comprising 3,063 acres. The revenue was enhanced on 12,294 acres on account of the improvement of areas recovered from rivers in previous years, while a reduction was made in respect of 8,419 acres which had deteriorated owing to river action.

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Fluctuating Land Revenue.

Demand and Collection.

92. Collections of fluctuating land revenue amounted to Rs. 144·26 lakhs, or nearly 6 lakhs above the total of the previous year. Most of the increase is accounted for by the development of canal irrigation in the new colonies and by the efforts made to extend the area under foodstuffs, but good rain in dry tracts such as Mianwali and Hissar also contributed appreciably to the improvement. The outstanding balance of fluctuating revenue at the close of the year was only Rs. 30,500.

Other Land Revenue.

Rents and Sales.

93. Collections of other land revenue show a net increase from Rs. 40·33 to Rs. 46·53 lakhs. Rents of lands leased out for temporary cultivation brought in an extra sum of Rs. 1·40 lakhs, while sales of Government estates and sales of Government waste lands surpassed the figures of the previous year by Rs. 1 lakh and Rs 4·31 lakhs, respectively

Miscellaneous.

Coercive processes.

94. There has been a further fall in the number of coercive processes the total of 11,434 comparing favourably with last year's figures of 12,430. Of the arrears amounting to Rs. 10·87 lakhs, 91·7 per cent. were recovered. The number of coercive processes issued on behalf of lambardars decreased by 15 per cent., while those issued against lambardars increased by 12 per cent. In connection with the processes issued there were only four cases of imprisonment and none in which direct management of land was undertaken or distress or sale of immoveable property ordered. In the Lyallpur District an increase in the number of processes is ascribed to the reluctance of zamindars to realize their grain in the expectation of rising prices, while in the Lahore District lambardars are said to have been chary of appearing during the stress of recruiting. As usual the Multan Division called for the greatest measure of coercion.

Postal process service.

95. The system of serving revenue processes through the post has continued to be utilized and has met with varying degrees of success in different districts. The reports from Ambala and Dera Ghazi Khan indicate that this method, like that which it replaces, is liable to failure when the addressee is determined to evade service. Only in Karnal has the system so far realised the expectation that its adoption would lead to substantial reductions in the establishments of tahsil peons; in fact in Gujranwala it was recently found necessary to sanction the temporary re-entertainment of twenty peons whose services had been dispensed with in the preceding year. On the whole, however, the system of service through the post seems likely to yield satisfactory results.

Methods of payment.

96. The practice of remitting land revenue by money order is steadily gaining in popularity and nearly 18 lakhs were thus paid during the year, as compared with 15 lakhs the previous year. No fewer than twenty-three districts availed themselves of the system which is obviously convenient to those who live at a distance from tahsil headquarters or have only small sums to remit. More than three and-a-half lakhs of revenue were paid by currency notes remitted through the post. In some districts such as Gujranwala, the lambardar has discovered that for sums exceeding Rs. 15 remittances of currency notes are cheaper than remittances by money order. Notes are not always, however, readily available in the villages and this form of remittance is in some parts distrusted by the people as likely to be attended with a certain amount of risk. The lambardars of Lyallpur were able to profit by the fact that currency notes were offered in the bazar at a discount, with the result that the whole of the large *rabi* instalment of land revenue found its way to the treasury in notes.

11.—Professional Surveys.

Surveys.

97. Riverain surveys were carried out by the Punjab Riverain Detachment of the Survey Department on the Indus, Ravi and Sutlej rivers in connection with the Dera Ghazi Khan and Multan Settlements. 440 linear and 706 square miles of main circuits and 3,904 linear and 762 square miles of minor traverses were run and 780 theodolite stations of the former and 16,282 of the latter were fixed in the area under river action. Corners of 173 squares in 1,181 square miles were demarcated with permanent mark stones on both banks of the Indus and the Ravi to serve as bases for the future survey demarcation of boundaries and fields in the beds of the rivers. 2,935 plotted and 816 boundary mapping large scale sheets and 40 four-inch sheets were traced and supplied to the Settlement Officers. Besides these 377 miscellaneous traces were prepared and all the traverse stations marked during the year were plotted on 58 four-inch sheets. Some of the Kangra computation volumes were completed. The total expenditure of the detachment during the year was Rs. 1,09,132.

98. Topographical survey operations were continued under No. 1 Party (Northern Circle) of the Survey of India which surveyed an area of 1,525 square miles on the scale of 1 inch = 1 mile in the Hoshiarpur, Jullundur and Kangra Districts and Chamba and Simla Hill States. This party also surveyed 61 square miles on the scale of 3 inches = 1 mile for the Artillery Practice Camp near Hoshiarpur. Triangulation operations for laying out on the ground the temporary marks from which the actual corners of rectangles will be fixed in connection with the Sind-Sagar Canal and Colonization Project in the Punjab were begun and completed during the year by the Sind-Sagar Party of the Northern Circle, Survey of India. The area triangulated was approximately 7,430 square miles in Mianwali, Shahpur, Muzaffargarh and Jhang Districts, with a view to the location of the corners of 4,000-acre rectangles to be undertaken next season. To assist this party in its work a new series of triangles extending from Sananwan in Muzaffargarh District to Hadali in the Shahpur District was laid out, built and observed by the Survey Department and observations were also completed at all stations built in the preceding year.

Boundary delimitation.

99. There was no important alteration in district boundaries during the year. There is some disagreement between the local officers and the State officials in regard to the location of 2 or 3 pillars on the boundary line between Sialkot and the Jammu State, and the matter is now before the Settlement Commissioner of the Jammu State. It is hoped that the question will be finally settled and the new pillars erected at an early date. Some disputes exist as to the correct position of the fixed boundary laid down some years ago between the Bahawalpur State and the Multan District owing to inaccuracies in the two sets of maps in which it was incorporated. The Settlement Officer of the district and the Director of Land Records of the Bahawalpur State drew up a scheme for the settlement of outstanding disputes and the demarcation of the disputed lines during the cold weather of 1918-19. A boundary difficulty between the Karnal District and the Jind State was decided and the boundaries between the Kangra District in the Beas and Chakki riverain and the Hoshiarpur and Gurdaspur Districts were laid down during the year. The draft bill for the compulsory demarcation of a fixed provincial boundary on the Jumna was still under the consideration of the Governments concerned.

12.—Revenue Surveys and Settlements.

Settlements commenced and in progress.

100. There were four settlements in progress during the year. In the Kangra and Ambala districts remeasurement, map correction and record work were completed and operations in the Rupar and Kharar tahsils of the latter district were brought to a close during the year. In the Multan district work was commenced in the Kabirwala and Mailsi tahsils. In connection with the Sind Sagar Canal Colonization Project a

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beginning was made with triangulation operations carried out by a party of the Northern Circle, Survey of India, and an area of about 7,430 square miles was triangulated as a preliminary to the location of the corners of the 4,000-acre blocks into which the tract will be divided.

Final Settlement Reports.

101. During the year the orders of Government were issuedin regard to the final settlement reports of the Sialkot, Jullundur and Simla districts. In the canal-irrigated tract of Sialkot, where the conditions have not yet reached stability, the term of the settlement has been fixed for 10 years, while for the remainder of the district not affected by the Upper Chenab Canal the term is 30 years. A similar term has been applied to Jullundur and Simla.

Settlements completed.

102. No settlements were completed during the year. The assessment reports of the Ambala, Naraingarh, Sangarh and Dera Ghazi Khan Tahsils were, however, received and orders passed on all, except the last.

Resettlements.

103. Forecast reports of the Montgomery District for the Sutlej Tahsils and the portion of the Ravi Tahsils outside the colony area, and of Sirsa Tahsil of the Hissar district were under examination during the year, but for various reasons it was decided to postpone resettlement in the Sutlej Tahsils and in Sirsa Tahsil until October 1919, and in the case of the Ravi Tahsils for another five years.

13.—Land Records.

Patwaris.

104. The conduct and efficiency of patwaris is generally reported to have been satisfactory and the number of dismissals fell from 111 last year to 77, while the number of other punishments fell from 2,531 to 2,510. Much extra work was thrown on patwaris by recruiting and war loan activities and several district reports acknowledge the help they gave in these operations. The good work of patwaris was rewarded by promotion to 64 superior posts, as compared with 36 in the previous year, while a number of other patwaris officiated in such posts. The rules regarding the grant of transit pay and travelling allowance of patwaris have been made more liberal during the year; war allowances were also granted to them, while the question of increasing their pay and gratuity on retirement is under consideration. The question of providing or renting patwarkhanas in circles where none at present exist is also being examined.

Kanungos

105. A new redraft of Standing Order No. 19 was issued during the year in which the rules regarding the appointment of Kanungos and the amalgamation of the district and the settlement staff were clearly defined. The question of the enhancement of the pay of kanungos is under consideration. The rule requiring that a kanungo should draw Rs. 20 and not Rs. 25 per mensem for the first year of his appointment was abolished during the year under report, while the recent appointment of a special Naib Sadr Kanungo in each district (except Simla), in order to render revenue records more accessible to Civil Courts, constitutes a material improvement in the prospects of kanungos generally. Kanungos on the district staff were promoted to other superior posts in 13 cases during the year, as against 5 in the previous year. It is satisfactory to note that in spite of increased duties due to recruiting, war loan and investigation into petitions received from soldiers on active service, the revenue work of Kanungos was generally kept up to date, while no deterioration in its standard is reported. As was the case last year that standard is considered to be satisfactory, except in a few districts.

Records.

106. During the year Settlement record remeasurement and map correction work was completed in the Kangra and Ambala Districts and was completed or well advanced in each of the four tahsils of the Dera Ghazi Khan District. The revision of the record began in Kabirwala and Mailsi Tahsils of the Multan District in October 1917, and satisfactory progress was made during the year.

107. The scheme of appointing a special kanungo to attend Civil Courts with revenue records and to prepare excerpts, where necessary, has been extended to most districts. The scheme is as yet of a tentative nature and will be fully examined shortly in the light of the experience of its first year's working on an extended scale.

14.—Waste Land and Government Estates.

Lower Jhelum Colony.

108. Agricultural conditions during the year were favourable on the Lower Jhelum Canal, one effect of which was seen in the good condition of the young stock. There was an increase in the number of sales by horse-breeders from 238 to 399. Although the importance of maintaining service conditions and ensuring the success of the horse-breeding scheme must remain a bar to the acquisition of proprietary rights, an appreciable advance has now been sanctioned in the devolution of administrative control. The recent establishment in certain selected zails of *panchayats*, which are intended to relieve the district staff of many duties connected with the local management, is one of the steps in that direction. The transfer to the district board of *darakhtpal* (arboricultural) grants that have been resumed for breaches of conditions will also result in direct management of the plantations by representatives of the community for whose benefit they exist.

109. The needs of the market towns in the Lower Jhelum Colony are being liberally financed by Government and annual grants equal to half the new land revenue assessment in each case have recently been made to them for a period of ten years. The whole cost of these grants will be borne by provincial revenues.

110. Fines amounting to Rs. 4,855 were imposed on 69 grantees and one-half of the grants of five grantees was confiscated temporarily and leased to other good horse-breeders. This expedient is likely to prove satisfactory and may render permanent confiscation unnecessary.

Lower Bari Doab Canal.

111. Total cultivation on the Lower Bari Doab Canal shows an increase of 27 per cent. on the previous year and amounted to 540,757 acres, nearly one-third of which was, however, on lands temporarily allotted. The remarkable extension of American cotton continues to be a gratifying feature, and there is good reason to think that this Colony will attain the same reputation for cotton as the Lower Chenab enjoys in the wheat markets.

112. The postponement of the Military reward grants and of that portion of the horse-breeding scheme which contemplates the distribution of official rectangles to peasant grantees, including soldiers, has again retarded the development of the Colony. The difficulty in regard to the shortage of land suitable for Military grantees is less acute than had at one time been feared. It is possible that the experiments inaugurated for the reclamation of inferior soils may ultimately add large tracts of commanded land to those immediately available for allotment, but it would be premature to count upon any such result at the present stage. The needs of the Colony have not been neglected by Government and at a recent visit to Montgomery and some of the new Colony Towns the Lieutenant-Governor was pleased to find substantial progress within the last two years, and a general spirit of optimism as to the great future before the Colony.

113. Good progress has been made in the construction of roads financed by Government, which has recently promised a contribution towards the metalling of the Montgomery-Pakpattan Road. The progress made, both by the district board and the Irrigation Department, in arboriculture is on the whole disappointing. Government is prepared to assist the district board in the starting of new dispensaries, the serious need of which has been evinced by the heavy mortality from malaria, plague and influenza.

It is only fair to say that the provision of travelling dispensaries was contemplated by the district boards of Multan and Montgomery as far back as 1916, but was prevented by the drain on personnel caused by the war. Well sinking is hampered by the lack of coal and the dearth of contractors, but these difficulties are being lightened since hostilities ceased.

114. Building in towns and markets has been retarded by the scarcity of labour and materials, but progress has been made in the Khanewal, Mian Channun and Chichawatni Mandis. Proposals have reached Government for the constitution of notified areas at Mian Channun and Khanewal, and as soon as the necessary machinery can be established, the rate of development should be increased.

Upper Chenab Canal Colony.

115. Some progress appears to have been made in inducing the colonists to build houses and sink wells in the village sites. This matter of well construction entirely overshadows in importance all other questions connected with this small Colony and the Standing Orders have recently been amended by a clause laying emphasis upon the desirability of a system of peripatetic distribution of *taccavi*, with oral application and disbursement on the spot, for tracts on which it is desirable to encourage such an agricultural improvement. The important question of the Colony's communications need urgent attention, and there should be no difficulty in utilising the Government grant for this purpose. It remains to be seen how far the Colony will benefit by the activities of the Agricultural Department, when the establishment of the rice farm at Kala Shah Kaku enables the department to bestow on the cultivation of this crop the attention which it has already so successfully exercised on wheat and cotton.

116. The Deputy Commissioner describes the Lyallpur portion of the Upper Chenab Colony as a congeries of holdings rather than a colony and the wise policy is being adopted of endeavouring to attract to it settlers of good peasant classes from the Lower Chenab Colony. The tract suffered an unfortunate loss in the damage caused to the American cotton crop by excessive rainfall.

117. It is interesting to note that the colonists on the Upper Chenab Colony are proposing with the help of *taccavi* advances to make their own brick kilns and to turn out bricks at two-thirds of the price charged in the neighbouring towns.

Upper Jhelum Canal Colony.

118. Neither harvest in this colony was good and the proportion of failed area was high. Satisfactory progress is being made in arboriculture and the improvement of communications, while sites in the market town of Baha-ud-din have been auctioned and construction is expected to begin in the near future. Among other signs of the prosperity of this little colony is the keenness which is reported to be displayed in obtaining temporary leases, the grant of which on a fairly large scale is now rendered possible by the completion of irrigation arrangements.

15—Wards' Estates.

119. The number of estates under the superintendence of the Court of Wards fell during the 12 months from 41 to 40, three estates having been released and two new ones brought under management. Among those released the Ramgarh estate had been under the Court of Wards for nearly 21 years during the Ward's minority. Debts amounting to Rs. 15,240 were discharged during this period and the ward on attaining

majority has been started upon his career with cash and securities amounting to nearly Rs. 15,000 in addition to an unencumbered estate greatly enhanced in value. During the year Rs. 5,62,953 were invested in Government securities compared with Rs. 5,22,673 in the preceding year. The largest investment in the War Loan was made by the Mamdot estate which added Rs. 2,63,000 to the 2 lakhs invested by it in the earlier loan. Substantial sums were also invested by the Guru Har Sahai, Kot Fateh Khan and Luddan estates. Owing to the large sums invested in the War Loan purchases of landed property were, as in the previous 12 months, of small account. Debts were repaid to the extent of Rs. 5,29,861, compared with an average of Rs. 2,14,114 in the three preceding years and the total liabilities at the end of the year amounted to Rs. 9,84,603 or less than 3 per cent. of the total assests which were estimated at Rs. 3,75,74,281. These figures include those estates which were released during the year. The careful management of the Court of Wards is shown by the fact that the liabilities of all the estates now under its charge have been reduced by Rs. 21¾ lakhs since they came under its superintendence, while the total cost of management, though varying in different estates, is on the whole only 10 per cent. of the total income. Meanwhile the balance of assets over liabilities has increased by Rs. 107 lakhs. Expenditure on permanent improvements has decreased from Rs. 1,42,201 to Rs. 1,08,716, nearly three-quarters of which is accounted for by the Mamdot and Kot Fateh Khan estates. The improvements made by these estates were of a miscellaneous character, but the arboricultural operations of the Mamdot estate deserve special notice. A sum of Rs. 12,389 was spent on these operations during the year and 21 miles of road were planted with *kikar* trees. This outlay will undoubtedly bring in a substantial return in the course of time. Great importance is attached to the agricultural training of wards and in addition to those who went through the vernacular course at the Lyallpur College in the previous year two more wards have undergone training during the year under report. The education of wards has progressed satisfactorily and more attention is being paid to their supervision during their holidays. The work done by several wards in the interests of recruiting and other war work is an encouraging feature.

16—Revenue and Rent-paying Classes.

General.

120. The total area of the Province as entered in the revenue records is now somewhat over 56¼ million acres. Of this nearly 34½ million acres are owned by agricultural tribes, 5¼ million acres by others, while rather over 16½ million acres consist of common lands, village sites and Government property. There has been a gross increase of a little over one-and-a-half million acres compared with the figures of last year and a rise exceeding three-quarters of a million acres in the cultivated area. The chief factors affecting the former are correct measurements of waste areas of *shamilat* and Government estates in the course of *killabandi* operations in the Montgomery Colony and also in the Gujrat District; to remeasurement in the Kangra District; and to the large area transferred from the United Provinces to Karnal by alluvion. The improvement in the cultivated area is due to good rainfall, to the efforts made to increase the area under food-grains and to the extension of canal irrigation. The cultivated area under mortgage shows a slight decrease as compared with last year and the percentage of this to the total cultivated area is now accordingly reduced from 11·5 to 10·9.

Loans under the Land Improvement Loans Act, XIX of 1883.

121. As compared with last year the amount advanced for land improvements decreased from 1·4 lakhs to rather less than Rs. 77,000. Except for the construction of embankments in a few districts, loans under this Act were taken solely for the purpose of sinking wells. A number of causes, however, restricted progress in this direction. Some of these causes were purely local, for example the floods in parts of Gurgaon,

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the extension of canal irrigation in Gujrat, and the effect of settlement operations in Jullundur and Dera Ghazi Khan. In general, too, the prevalent high prices of material and labour naturally tended to check development. It seems clear, however, that while wells are required, the people themselves are able to an increasing extent to finance the work without the help of *taccavi*. The war has in many respects increased their resources, and remittances received from soldiers were, to a large extent utilised on land improvements. In addition, with the spread of co-operative enterprise, there is a tendency to resort for assistance to the local societies rather than to Government. Efforts have, however, been made to simplify the procedure for loans under this Act. Applications will now be received and disbursements made by officers on tour, and it is hoped that these arrangements will further assist the objects of the Act.

Loans under the Agriculturists Loans Act XII of 1884.

122. The amount advanced under this Act rose from 1·5 to 3·1 lakhs. In seven districts no advances were made and in only six districts did the advances exceed Rs. 10,000 each. In Gurgaon Rs. 87,000 were advanced, as relief was required for sufferers from floods. In other districts measures for extending the cultivation of food grains helped to stimulate the demand. In the remote Spiti tract *taccavi* proved valuable in relieving distress caused through the failure of the local harvest in 1917 and the loss of animals due to the early fall of snow in the autumn of the same year.

Transfers.

123. The cultivated area (ownership) sold during the year was 100,650 acres, or about 6,500 acres less than in the previous year. This is the lowest figure for 22 years. Sales of uncultivated land (ownership) have also fallen from 112,314 to 71,803 acres. Muzaffargarh was again the district in which the largest area was sold, but even in that district the area sold, owing, it is reported, to the prevailing financial stringency, bad seasons, and possibly also to feelings of uneasiness in regard to the war, was considerably less than last year. In Mianwali a large area of *shamilat* land of very poor quality was sold owing to the extension of gram cultivation. The total cultivated area (ownership) redeemed during the year was 200,855 acres against 187,407 acres last year and the mortgage debt discharged amounted Rs. 1,77,00,000, as compared with Rs. 1,45,00,000. Progress in redemption is marked in the districts of the Ambala Division and is ascribed to a good *rabi* harvest, to the high prices of produce and to remittances from men in the Army. The reasons for the progressive decrease in the area redeemed during the past years have formed the subject of an enquiry and a report on the subject will be submitted shortly. There has been a considerable drop in the number of cases instituted under the Redemption of Mortgages Act (from 2,932 cases last year to 2,464 cases in this year), but notwithstanding this the Act is said to be appreciated. The cultivated area (ownership) mortgaged during the year was 199,779 acres as against 219,812 acres last year. During the previous year mortgages had exceeded redemptions by 32,000 acres, so that the small gain of 1,000 acres this year must be regarded as satisfactory. The area transferred by gifts has also fallen from 86,000 to 75,000 acres, these gifts, as usual, being mainly alienations for religious and charitable purposes or transfers to relations. The area affected by exchanges amounted to 31,600 acres as compared with 43,000 acres and the transactions as a rule had in view the consolidation of holdings.

Value of land.

124. The average recorded price of cultivated land has again risen, the price for 1917-18 averaging Rs. 252 per acre, as compared with Rs. 227 for 1916-17. The rise continues to be almost general throughout the province, and, as remarked last year, it is due to the general rise in prices of agricultural produce, though the movement has also been assisted by the large sums of money available from remittances sent by men serving in the Army. The few districts which exceptionally report a fall in the

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price of land attribute the decline variously to diminishing popularity of land as an investment for money, to the war loan, to the sale of land of inferior quality as in the Mianwali Thal, and to the sale of holdings in colonised areas to Government tenants at rates much below the real market value. The sale price for the province as a whole this year represents no less than 171 years' purchase of the land revenue assessed as against 157 years' last year. The mortgage value of land, the ownership of which was mortgaged during the year, was Rs. 329·86 lakhs and represents 91 times the land revenue assessment of the land as against 85 times in the previous year. The average mortgage money per acre on the whole area mortgaged was Rs. 140 as compared with Rs. 106 last year.

Land Alienation Act.

125. No new tribe was notified under the Land Alienation Act during the year. Agricultural tribes gained by purchase a net increase of 9,000 acres as compared with of 21,000 acres in the year preceding. The net loss to agricultural tribes in cultivated and uncultivated land by mortgage and redemption taken together was 28,000 acres against 45,000 acres last year. Sales by agricultural tribesmen have again fallen from 183,000 to 146,000 acres, nd sales to them have fallen from 203,000 to 155,000 acres, while sales to others show a decrease from 38,000 to 34,000 acres, a further improvement in last year's record figures. A few districts report the detection of cases of *benami* transactions, which were all set aside. These transactions, however, appear to be on the decrease.

Rent-paying Classe

126. The numbers of suits brought for enhancement of rent (1,035) and of successful suits of that class (920) continue to decrease. Suits for reduction of rent, however, rose from 13 to 28.

127. There were 111 decrees for ejectment of occupancy tenants under section 39 of the Tenancy Act as against 120 last year. The total number of ejectments of occupancy tenants actually carried out during the year was only 48, as compared with 131 the previous year. There has been a large decrease in the total number of applications for service of notice of ejectment and of notices of ejectment of tenants-at-will, and in consequence the ejectments only total 3,992 against 6,592 last year. The lowness of the figures are not improbably due in some measure at least to a scarcity of tenants owing to the large enlistments in the Army.

MISCELLANEOUS.

Punjab Land Preservation (Chos) Act.

128. Proposals for extending operations under the Chos Act in Ambala and Hoshiarpur Districts were called for. A sum of Rs. 1,50,000 was entered in the schedule of new expenditure for the financial year 1919-20 to meet the cost of these extensions and proposals for the assessment and payment of compensation for restrictions under section 5 of the Chos Act in the Rupar and Kharar Tahsils, which are estimated to cost approximately Rs. 1,28,000, are now under consideration. It is also proposed that a forest officer should be put on special duty to report in consultation with the local officers on the whole question of remedial measures against Cho action in the Morni *ilaqa* and in the hills and plains of the Naraingarh, Jagadhri and Ambala Tahsils. A grant of Rs. 2,000 was placed at the disposal of the Deputy Commissioner, Ambala, for the reclamation and training of Cho beds in the district. In Hoshiarpur experiments on a fairly large scale were made in the Maili Cho with a view to confining the Cho water to its proper course. These experiments were carried out by the zamindars themselves acting under directions, and they have proved most valuable. The afforestation of the Siwaliks in that district is proceeding satisfactorily. Shisham and bamboos have been sown to some extent while the grass crop was abundant. Grazing of camels is now permanently prohibited in the Hoshiarpur

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Siwaliks and Rs. 3,488 were paid during the year as compensation on this account.

The Descent of Jagirs Act.

129. Four Jagirs—two held by members of the Bhai family in the Lahore District and two by members of the Mandal family in the Karnal District—were notified during the year under the Descent of Jagirs Act. This brings the total number of jagirs notified under the Act to 149.

CHAPTER III.

PROTECTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Police.—(1) Report on the Police Administration of the Punjab for the year 1918.

(2) Report on the working of the Criminal Tribes Act for the year 1918.

(3) Report of the Chemical Examiner to Government, Punjab, for the year 1918.

Criminal Justice.—Report on the Administration of Criminal Justice in the Punjab and its Dependencies during the year 1918.

Prisons.—Report on the Administration of the Jails in the Punjab, 1918.

Civil Justice.—Report on the Administration of Civil Justice in the Punjab and its Dependencies during the year 1918.

Registration.—Report on the Administration of the Registration Department of the Punjab for the year 1918.

Legal affairs of Government.—Report on the Administration of Legal Affairs of the Government of the Punjab for the year 1918.

Local Boards Administration.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1918-19.

Municipal Administration.—Report on the working of Municipalties in the Punjab during the year 1918-19.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume IV, Administrative and Judicial (including area, population and local funds).

17.—Legislating authority during the year 1918-19.

130. The following changes took place amongst the members of the Council :—

(1) The Hon'ble Mr. D. W. Aikman, C.I.E., was nominated in place of the Hon'ble Mr. W. F. Holmes, resigned.

(2) The Hon'ble Captain Sardar Gopal Singh was nominated in place of the Hon'ble Sardar Bahadur Risaldar Partab Singh, resigned.

(3) The Hon'ble Mr. T. P. Ellis, I.C.S., was nominated in place of the Hon'ble Mr. S. W. Gracey, deceased.

(4) The Hon'ble Mr. Lewis French, C.I.E., I.C.S., was nominated in place of the Hon'ble Mr. J. P. Thompson, resigned. The latter was subsequently re-nominated in place of the Hon'ble Mr. Craik who had resigned on leaving the Province.

(5) The Hon'ble Colonel MacWatt was nominated in place of the Hon'ble Colonel Hendley, resigned.

(6) The Hon'ble Mr. F. W. Woods was nominated in place of Mr. D. W. Aikman, resigned.

(7) The Hon'ble Mr. F. C. Waller was elected by the Punjab Chamber of Commerce as a member *vice* the Hon'ble Mr. James Currie, deceased.

18.—Course of Legislation during the year 1918-19.

131. Twelve meetings of the Legislative Council were held during the year under report at the Government House, Lahore (24th, 25th and 26th April 1918, 4th May 1918, 20th and 21st November 1918, 7th December 1918, 6th and 7th February 1919, 7th, 13th and 14th March 1919). Meetings.

Bills introduced.

132. The following Bills were introduced in Council during the year :—

(1) Punjab Courts Act Amendment and Validation Bill.
(2) Punjab Compulsory Education Bill.
(3) Punjab Adulteration of Food Bill.
(4) Punjab Municipal Act Amendment Bill (No. 5 of 1919).
(5) Punjab District Boards Amendment Bill.
(6) Simla House Accommodation Act Amendment Bill.
(7) Punjab District Boards Act Amendment Bill (Registration of Marriages).
(8) Bill to amend the Punjab Courts Act, VI of 1918.
(9) Punjab Custom (Power to contest) Bill.

The first eight were passed while No. 9 is yet pending.

Bills passed.

133. The following Bills which were pending at the close of the year were passed during the year under report :—

(1) Punjab Juvenile Smoking Bill.
(2) Punjab Small Towns Patrol Bill.

Resolutions.

134. In addition to 18 Resolutions on the Constitutional Reforms the following Resolutions were moved :—

(1) Resolution *re* the grant of Grain Compensation Allowance.
(2) Resolution of Loyal Congratulations to His Majesty the King-Emperor on final victory.
(3) Resolution of sympathy to Their Imperial Majesties the King-Emperor and Queen Empress on the death of their youngest son, Prince John of Windsor.
(4) Resolution *re* the meeting of no less than three-fourths of Educational Expenditure of local bodies from Provincial revenues.
(5) Resolution *re* the meeting of three-fourths of Sanitary expenditure from Provincial Revenues.
(6) Resolution *re* the budgetting of rupees five lacs more for Heads 24-B.—Sanitation Expenditure and effecting a corresponding decrease under the Heads 10, 11, 32 or 45.
(7) Resolution *re* budgetting ten lacs more for Head 22—Education Expenditure and effecting a corresponding decrease under Heads 10, 11, 32 or 45.
(8) Resolution *re* budgetting rupees two lacs more for 26—B-Expenditure and effecting a corresponding decrease under Head 32 or 45.

Nos. (2) and (3) were carried. Nos. (4), (6) and (7) were lost and Nos. (5) and (8) were withdrawn. No. 1 was deferred in order that the matter might be considered by a Small Committee.

Questions.

135. Two hundred and thirty-four questions were put and answered.

India Acts.

136. One Act particularly affecting the Punjab was passed by the Imperial Legislative Council during the year. This supplemented the Punjab Courts Act of 1918.

19.—Police.

General Police Force.

General.

137. The number of true cognizable offences of all kinds dealt with by the Police in 1918 was more by 166 or a half per cent. than in the previous year in which a reduction of 13·8 per cent. was shown. Excluding petty offences under local and special laws, there were 25,605 true cases as against 24,279 in the previous year—an increase of 5½ per cent. on the figures of 1917.

138. The feature of the curve of provincial crime for the years 1916 and 1917 was its sharp declining tendency. In the first half of the year under review, however, the curve straightened out and in August, under the stimulus of a sudden and marked rise in the price of foodstuffs, started on an upward path which, with the exception of a drop in November due to the inhibitory effects of the influenza epidemic, it pursued up to the end of the year. It is still (1919) ascending, but will have to climb a long way before it touches the 1914 level. Many factors combined to produce the increase in the latter half of the year. The sudden, and, to some extent, artificial rise in the prices of foodstuffs resulted in the commission by the needy of petty thefts and burglaries, and incidentally stimulated the activities of habitual offenders and the settled criminal tribes which had not been touched by the operations of the Criminal Tribes Department against wandering tribes in the preceding year. Wholesale recruiting operations in the first half of the year unsettled the people generally, and nearly tripled the number of military deserters for whom crime alone furnished a means of livelihood. The mushroom military depôts scattered all over the province were full of bad characters who, disturbed by the news of approaching demobilization, commenced harrying the neighbourhood. And last, but not least, was the effect upon the province generally of the removal of the restraint, both moral and physical, which war conditions had imposed. The province had behaved remarkably well for four weary years and some reaction was inevitable.

139. The co-operation of the public throughout the year has been acknowledged by cash rewards and grants of land, while on the other hand failure to realise responsibilities in this connection has led to the punishment of village officers and the location of punitive posts of which 25 were in existence at the end of the year. This policy has been pursued with successful results for the past 5 years, and it is satisfactory to be able to note that with the exceptions of a few instances of lawlessness and defiance to constituted authority, which were the results of opposition to recruiting on the part of backward localities where no military traditions existed, a marked feature of the year has been a due respect for law and order on the part of the public.

Murders and dacoities.

140. Murders have steadily decreased, with the exception of a slight relapse in 1916, from 538 in 1914 to 508 in 1918. It is satisfactory to note that murders in the Shahpur district decreased from 37 in 1917 to 27 in the year under review. There was, however, an epidemic of murders in the villages at the foot of the Salt Range in May, June and July which is attributed by the District Magistrate to the irritability caused by the excessive heat in those months.

141. There were only 41 cases of dacoities during the year as compared with 53 in the previous year. The Ferozepore, Hissar, Ludhiana, Jullundur and Native States Police are to be congratulated on the success achieved in breaking up the Central Punjab gangs of dacoits, and the thanks of Government were conveyed to the combined Military and Police Forces engaged in rounding up the notorious Jabbi outlaws in the Attock District.

Burglaries and thefts.

142. Burglaries rose from 11,047 in 1917 to 12,332 in 1918, showing an increase of 1,285 cases or 12 per cent. Ordinary thefts also show a rise from 4,907 to 5,498, *i.e.*, an increase of 519 cases or 12 per cent. The increase in this form of crime is evidently due to the unprecedented rise in the prices of the necessaries of life and the swarms of military deserters roaming at large in the country-side. It is hoped, however, that the vigorous application of the two new preventive measures, the Village Patrols Act and the Act for the Restriction of Habitual Offenders, will do much to check crime of this description.

Police Working.

143. Detection and prosecution results were distinctly unfavourable during the year under review, the all-round percentage of cases convicted to true cases being 28·58 as against 32·68 in the previous year, while the percentage of cases and persons convicted to cases and persons tried was 70·33 and 56·91 as compared with 72·43 and 57·32 in 1917. This falling off in convictions may be accounted for by the influenza epidemic, the withdrawal of trained policemen for service in the police battalions, and, to some extent, by the fact that trivial charges against offenders who volunteered to join the Army were withdrawn.

Preventive Measures.

144. During the year under report 2,270 persons were called upon to furnish security under section 110 of the Code of Criminal Procedure, as compared with 2,655 in 1917, *i.e.*, a decrease of 385. The decrease is explained by the continued enlistment of bad characters in the Army. The Village Patrols Act and the Restriction of Habitual Offenders Act can now be legally enforced where required and have already begun to prove their usefulness.

Criminal Investigation Department.

145. The Criminal Investigation Department continued to render excellent service to the Administration. No important cases of political crime occurred during the year and in consequence the investigation staff were able to pay considerable attention to ordinary organized crime, such as *barda faroshi* (trade in women) and thefts from registered and insured letters and parcels.

146. Under the Ingress Ordinance the number of persons interned on 31st December 1917, was 57, 39 were interned during the year and 80 were released, leaving a balance of 16 at the end of the year. Similarly the number of those restricted on 31st December 1917, was 905, 81 were restricted during the year and 439 had their restriction orders cancelled, the balance at the end of the year being 545. Under the Defence of India Act the number of those under restriction at the end of the year was 76 as compared with 84 at the close of the preceding year. Now that the war is over, the cases of men still interned or restricted are subjected to periodical consideration.

Finger Print Bureau.

147. During the year 27,469 references were received by the Finger Print Bureau at Phillaur for search, of which 5,332 were traced, as compared with 29,424 slips referred and 5,567 traced in the previous year. The number of finger impression slips on record at the end of the year was 261,186 as against 251,391.

Internal Economy.

148. During the year two new Police Stations were located at Kunjah and Baha-ud-din in the rapidly developing canal tracts of the Gujrat District. The separation of the Railway Police from the Criminal Investigation Department alluded to in paragraph 147 of last year's report was carried into effect in the spring of 1918. Under the new scheme the safety of passengers has been provided for by a large increase to the train patrolling establishment, and a central investigating agency to deal with complicated cases of railway crime which frequently extend over several jurisdictions and provinces has been created. At the same time the energies of the force have been limited to the performance of legitimate duties, the Railway Department being left to provide for the watch and ward of railway property and goods as contemplated in the orders of the Government of India on the subject. During the year steps were also taken for the replacement of enrolled police clerks in the separate offices of all Deputy Inspectors-General (including the Criminal Investigation Department) and the Railway Police by civilian clerks, and the amalgamation of these establishments with the existing clerical establishment of the Central Police office. This measure is expected to ensure an even flow of promotion in the combined cadre, and to improve the prospects of clerical employees to a considerable extent, besides promoting general office efficiency.

Rural Police.

149. During the year 7 zaildars, 117 lambardars and 154 village chowkidars were punished for neglect of their duties connected with the criminal administration, but on the whole the rural police continued to render useful assistance to the regular force.

CRIMINAL TRIBES.

General. 150. The initial difficulties of the scheme outlined in last year's report, having been overcome, attention was devoted to developing the settlements and thereby giving effect to the new arrangements by the gradual removal, from districts, of members of criminal tribes who were either unfit to be left without stricter supervision than it is possible for the district police to exercise or who were deserving of reward for good behaviour and could set a good example to their less reformed brethren. Most of the violent wandering tribes had been placed in settlements in the first year. It therefore became possible to tackle the more criminal settled tribes who, though not so bitterly complained of as the wandering section, have been found to be responsible for many unreported and untraced crimes. But the difficulties experienced in dealing with the settled tribes have turned out to be far greater than was anticipated. The circumstances of the tribes are more varied and the worst characters amongst them often have a strong backing among the local zamindars. Efforts were made to multiply labour-supplying settlements, and it was arranged that the employers of labour should construct settlements at their own cost, provide medical aid, and, as far as possible, be responsible for sanitation. The police officers on the staff were engaged largely in tracing and bringing back absconders. As a result of the classification mentioned in paragraph 151 of the last report the registration of 2,693 men was cancelled under Rule 24 of the rules under the Criminal Tribes Act, and proposals are under consideration to relax restrictions in the case of comparatively harmless tribes. The introduction of the scheme has resulted not only in the transformation of criminal tribesmen placed in settlements but has had the general effects of stimulating the criminal tribes to find remunerative occupation in their places of residence for fear of being removed to settlements.

Number on registers. 151. Excluding men whose registration was cancelled and men who died, and adding fresh registrations, the total number of male adults on the registers was 31,473 at the end of the year of report against 33,498 on last January 1918. At the end of the year under report only 5,901 of these, including 2,223 registered males, were in settlements. Supervision over all the other members of criminal tribes is exercised through the local police and was fairly effective.

Progress. 152. While the organization and development of the settlements have not been free from serious difficulties the results so far must be regarded as highly promising. Many men, women and children whose livelihood depended on crime have been brought under healthy influences and even hardened criminals, regarded as incorrigibles, are now earning an honest livelihood in the settlements and thereby setting a most useful example to others. The gospel of the dignity of labour is slowly making headway with the result that the prejudice against employment in mills and factories is dying out. Cases of breach of discipline are becoming less common. Attempts are now being made to start Co-operative Credit Societies, and altogether the situation, while it calls for constant vigilance, is distinctly hopeful.

Settlements. 153. At the close of the year under report 16 settlements were in existence. Eight new settlements were established while two had to be closed, the inmates being transferred. Of the 16 settlements, 10 are in the charge of various societies, the Salvation Army and the Arya Samaj, each undertaking the control of three. In the majority of cases the Societies evince a keen interest in this branch of their work.

Convictions. 154. The percentage of total convictions on the total registered male population, which had fallen last year from 10·8 to 2·3 has sunk further to 1·6. The percentage of convictions under the Indian Penal Code fell from ·54 to ·36; and it is a matter of satisfaction that the percentage of convictions under the Indian Penal Code among the wandering section, which has so far been known as the more troublesome, was ·2 while the corresponding figure for the settled tribes was ·44.

Expenditure.

155. The total expenditure of the year amounted to Rs. 2,48,000 of which Rs. 1,30,000 was recurring. The settlements are still in the process of development and expenditure has not yet risen to the full estimated limit. Owing to the introduction of economic methods it has been possible to run the settlements, at a lower rate than was expected, and it seems probable that without exceeding the maximum figure sanctioned the number of settlements provided in the scheme may be exceeded.

Co-operation of Native States.

156. All the Native States adjoining the Punjab sent intimation of having taken the necessary steps for the control of criminal tribes, in pursuance of the resolutions passed at the conference referred to in paragraph 160 of last year's report. The Patiala, Bahawalpur, Bikaner, and Kashmir Darbars rendered all possible assistance in the arrest of absconders from the Punjab and the Patiala Darbar is taking steps to establish two Industrial settlements in the State.

Recruiting.

157. In November 1918 when recruitment was stopped owing to the cessation of hostilities in Europe the aggregate of recruits supplied by the criminal tribes stood at 2,017, including 1,307 combatants. The more important contributions were made by the Baurias of the Central Punjab who were placed in a separate double company of the 2/35th Sikhs, the Eastern Punjab Baurias from Hissar and Gurgaon who enlisted as drivers, the Harnis of Ludhiana, some of whom went as artillery drivers, the Heris of Hissar who enabled the formation of a strong double company of Pioneers, the Bars and Tharanas of Lyallpur and the Nur Mahrams and Akla Hayats of Jhang who enlisted in the 2/56th and 2/72nd Punjabi Regiments. The aversion of members of criminal tribes to service of any kind is proverbial. It is therefore a matter of satisfaction that they did their duty by furnishing recruits to the extent of about one-fifteenth of the total male adult population over 12 years of age and that more than 65 per cent. of the recruits enlisted as combatants.

Chemical Examiner.

General.

158. The building of the new Chemical Laboratory in Lahore was commenced during the year and the work is now well advanced. The Murree Laboratory which was practically completed by the end of June, was in use for the first time during the remaining hot weather months and proved in every way suitable.

Cases.

159. The number of cases investigated by the Chemical Examiner decreased from 1,427 in the previous year to 1,297 in 1918. The decline has been progressive for the past five years and is partly due to the diminution of crime and partly to the greater number of cases sent to the Imperial Serologist at Calcutta, nearly half the blood work of the Province having been disposed of in this way during 1918. Human poisoning cases account for nearly 54 per cent. of the medico-legal work. Although opium continued to hold the field as the favourite poisoning agent, appearing in 28·42 per cent. of cases, it was closely rivalled by arsenic which was detected in 27·72 per cent. of the total number of cases. In animal poisoning arsenic was, as usual, most commonly employed.

20.—Criminal Justice.

General.

160. The total number of offences reported during the year was 164,512 as compared with 180,819 in the previous year. The decrease in crime is mainly due to the continued operations of the causes mentioned in paragraph 162 of last year's report. An additional cause is to be found in the spread of influenza in an epidemic form during the months of October and November 1918.

161. The number of true cases was 103,825 or 63 per cent. of the total reported.

162. The number of cases brought to trial, *i.e.*, true cases, less those dealt with under sections 247 and 259 of the Criminal Procedure Code, during the year was 98,008 and the number of persons involved in them was 228,061, as against 109,001 cases and 249,842 persons in the preceding year.

Disposal of cases.

163. The total number of criminal cases disposed of during the year under report was 157,530 as compared with 178,053 in the previous year. Of the total number of decided cases 147,324 or 93·5 per cent. were original cases and 10,206 or 6·5 per cent. were cases in appeal and revision.

164. Of the 228,061 persons brought to trial, 156,474 or 68·1 per cent. were acquitted or discharged; 55,988 or 24·55 per cent. were convicted; 601 or ·26 per cent. died, escaped or were transferred to another province and 14,998 or 6·58 per cent. remained under trial. In the previous year the corresponding percentages were 68·4, 26·02, ·08 and 5·05 respectively. Of the 156,474 persons acquitted or discharged, 63,884 or 40·82 per cent. were discharged in consequence of the non-appearance of the complainants or the withdrawal of the complaint.

165. Under the Indian Penal Code reported offences have dropped from 126,426 to 113,771 and those admitted to have occurred, including offences reported during and pending from the previous year, from 76,781 to 68,203. Of 140,380 persons brought to trial under this Code, 20,017 or 14·26 per cent. were convicted. Of the 21,374 persons brought to trial whose cases were challaned by the police, 12,165 or 56·9 per cent. were convicted, but of the 119,015 persons dealt with on private complaints only 7,852 or 6·9 per cent. were sentenced.

Serious forms of crime.

166. Dacoities dropped from 109 in 1917 to 84 in 1918, and robberies from 287 to 243. On the other hand thefts and the receiving of stolen property taken together shew a slight increase. The District Magistrate of Lyallpur reports that "the village patrol system, the regulation of the criminal tribes, and the colonization of the Lower Bari Doab have sounded the knell of the aboriginal cattle-thief in the Rachna Doab."

Murders.

167. The number of persons brought to trial for murder (sections 302 and 396, Indian Penal Code) was 1,110 of whom 466 were convicted, and 232 death sentences were pronounced by Sessions Judges subject to confirmation by the Chief Court. Of the total number of persons whose cases came before the Chief Court for confirmation of the death sentences, 65 per cent. obtained no reduction of sentence, 10 per cent. were transported for life, 5½ per cent. were convicted of lesser offences than murder and nearly 20 per cent. were acquitted. In addition to the 135 death sentences thus maintained by the Chief Court, 13 death sentences were also passed by that Court by way of enhancement of the sentences of lower courts.

168. His Honour the Lieutenant-Governor commuted the death sentence of 9 convicts to transportation for life and that of one convict to 14 years' rigorous imprisonment. His Excellency the Governor-General in Council commuted the death sentence of 2 convicts to transportation for life.

Matrimonial offences.

169. Matrimonial offences have decreased from 8,723 to 7,417. The decrease is partly due to the action of certain District Magistrates who have encouraged the idea that the worst type of offender is the person who commits an offence against a man on active service. The extension of the marriage registration system has also helped to reduce this type of crime.

Miscellaneous.

170. Reference was made in paragraph 175 of last year's report to the opinion expressed by the Judges that more cases would be dismissed under section 203, Criminal Procedure Code, if they were heard in the first instance by experienced 1st Class Magistrates. Although this view is supported by certain District Magistrates, there are others who are not

favourably impressed with the working of the scheme in their districts. No doubt 1st Class Magistrates have had many extra duties to attend to during the year, but under less strenuous conditions they should be able to devote the time, skill and patience, which are necessary if this system is to be a general success.

171. An Additional Judge was again sanctioned for a portion of the year for the inspection of the work of the lower courts. During the past cold weather, the courts have been inspected by the Inspecting Judge at the head-quarters of 20 districts and one tahsil.

172. During the year the Act for the restriction of habitual offenders within their villages came into operation. In a number of cases the security order under Chapter VIII, Criminal Procedure Code, was cancelled and an order of restriction substituted for it. The District Magistrate of Ambala remarks: "The Act is obviously disliked by the persons affected, proof, if any, were needed, of its utility". The District Magistrate of Multan on the other hand writes as follows: "So far accused persons appear to prefer restriction to security, and I am not yet satisfied that restriction can be made really effective". It is still too early to form an opinion on the general working of the Act.

21.—Prisons.

Institutions.

173. The only changes effected in the number and constitution of the jails during the year were the reduction of the District Jail at Ambala to a subsidiary status and the closing of the Sub-Jail at Kulu.

174. The Camp Jails at Dhariwal and Khewra continued to do good work at the Woollen Mills and Salt Depôt, respectively. In appreciation of the work done at these institutions, the management of the former has offered to employ prisoners on their release and the Commissioner of Salt Revenue has expressed his desire for a permanent jail at Khewra.

Military labour and War work.

175. On the signing of the Armistice, further recruiting for the Jail Labour and Porter Corps ceased. In all 5,152 men were despatched to Mesopotamia.

176. To meet the demands of the Military authorities and Munitions Board, all work other than that deemed "essential" was suspended and a policy of concentration on war demands adopted. The Arsenals at Rawalpindi and Ferozepore as well as Grass Farms and Military buildings in various Cantonments have been supplied with labour amounting in the aggregate to 1,000 men daily.

Accommodation.

177. The total accommodation decreased from 14,699 to 14,687 owing to the closure of the Kulu Sub-Jail. Against this accommodation there was an average of 14,108 prisoners in jails throughout the year.

Admissions.

178. The number of admissions (15,851) shows a decrease of 1,371 or 7·9 per cent. and the average daily population (14,108) a decrease of 346 or 2·4 per cent. The number of prisoners received from jails outside the province, most of whom were from the North-West Frontier Province, amounted to 1,390.

Juveniles and juvenile adults.

179. During the year the addition of a Headmaster and a Second Master to the teaching staff of the Borstal Central Jail has resulted in a marked improvement in the quality and method of teaching. The addition of a Factory Supervisor and the revision of the scales of pay of certain Factory Staff have improved the outturn of the Factories.

180. Three lads were released conditionally to the Lahore Municipality under the scheme introduced in 1916. The further extension of this scheme has been somewhat hindered by the demands for labour at the Dhariwal Camp Jail. The religious aspect of the Borstal training has become a marked feature in the daily routine of the institution, and can but have beneficial results. Work on Military equipment, such as tents, ropes and water-buckets, has continued.

Under-trials.

181. The large increase amongst under-trial prisoners is due to the presence of a large number of Military deserters. The average period of detention in jail was much the same as in previous years.

Escapes.

182. During the year there were 12 escapes as against 9 in 1917. Of these only one was from inside jail walls, the remainder, including one prisoner from the Camp Jail at Khewra, making off from outside. This number includes three cases of escapes of prisoners who were at the time under the immediate guard of the Police or Military authorities.

Staff.

183. The number of resignations among warders fell from 294 in 1917 to 164 in 1918. Great difficulty was, however, experienced in obtaining recruits and those forthcoming were not up to the required standard. To relieve the situation, brought about by the fact that the warder guard were much under strength, a scheme was submitted, and sanctioned for one year, whereby an expansion of the rules governing the promotion of convict officials was permitted.

Discipline.

184. The jail offences and punishments fell from 21,354 to 16,689, the causes being attributed to—

(*a*) reduced population ;

(*b*) outbreak of influenza ;

(*c*) employment of prisoners on untasked military labour ; and

(*d*) a smaller number of habituals.

Expenditure.

185. The expenditure on the guarding and maintenance of prisoners increased from Rs. 12,42,290 in 1917 to Rs. 14,42,805 during the year. The causes of this large increase are to be found in the increased pay of warder guard, establishment, grants of war and grain compensation allowances, and the high prices of food-stuffs and other articles. The cost per head showed an increase from Rs. 86-14-4 in 1917 to Rs. 102-7-2.

Industries.

186. The daily average number of convicts sentenced to labour fell from 12,718 in 1917 to 12,144 and the total cash profits increased from Rs. 85,838 to Rs. 2,83,006. This increase is due largely to the employment of prisoners on war work. The cash profits would have considerably exceeded the total already given had it not been for the purchase of large quantities of cotton yarn at high rates in anticipation of orders from the Military Department, which unfortunately did not materialize, together with the complete cessation of work, in several instances, during the severe epidemic of influenza in September and October last.

Health.

187. Admissions to Hospital increased from 14,299 to 18,126 and the daily average sick from 545 to 698, while deaths were more than double the figure of the preceding year. These rises are entirely due to the appalling epidemic of influenza which raged in September for three months. The number of deaths from this disease alone amounted to 475 out of a total of 837. Admissions and deaths from tuberculosis were 102 and 55 respectively as compared with 279 and 91 in 1917—a marked improvement.

188. Pneumonia accounted for 402 admissions and 97 deaths as against 359 admissions and 88 deaths in the previous year. The increased mortality shown under this head was probably due to influenza. There was a decrease from 5,459 to 3,980 in admissions on account of Malaria but the number of deaths rose from 14 to 19.

189. Two cases of Plague occurred in the Lahore Female Jail in January, the source of infection being probably the same in both cases.

22.—Civil Justice.

Institutions.

190. The total number of original Civil suits instituted in all Courts was 174,408 against 202,893 in the preceding year, a decrease of 28,485 including a decrease of 21,854 in money suits.

191. These remarkable decreases were partly due to the War which removed temporarily many possible litigants, partly to the widespread epidemic of Influenza during October and November, but also to the high prices of agricultural produce which enabled many debtors to pay off their debts in whole or in part and to the work of Co-operative Societies.

192. The total number of suits for money or movable property brought by bankers and shop-keepers against agriculturists fell from 73,558 to 63,300. The District Judge, Ludhiana, explains that the low percentage in his district is due to a reluctance on the part of shop-keepers to lend money to agriculturists and the growth of a body of well-to-do money-lenders among the agricultural classes. In certain districts there can be no doubt that the work of Co-operative Societies makes for a decrease in suits of this character.

193. The total number of suits for money or movable property fell from 171,888 to 150,034; the percentage of these suits on all suits, however, rose from 84·7 to 86.

194. There was a notable decrease of 512 in the number of suits to establish a right of pre-emption. The District Judge of Jullundur reports that a local rise in this form of litigation was due to the large sums of money coming into the district on account of pay and pension and subsequently invested in the purchase of land.

195. Matrimonial suits further decreased from 2,087 to 1,600. The system of marriage registration, which continued to extend during the year, has largely contributed to this satisfactory result.

Insolvency Act.

196. Application for a declaration of insolvency under Act III of 1907 including those pending from the previous year fell from 3,848 to 3,016; of these 1,265 were withdrawn or not prosecuted. The number of applications allowed fell from 1,429 to 1,240. Over 86 per cent. of the applications made during the year were presented by debtors.

197. A report was received from Gurdaspur that agriculturists desirous to evade payment of their just debts were taking advantage of the Financial Commissioner's ruling published in the Punjab Record (Revenue) Judgment No. 8 of 1917, wherein it was held that even temporary alienation of the land of an agriculturist in compliance with the decree or order of a Civil Court cannot be effected under the law as it stands at present in the Punjab. This ruling is however in conflict with a more recent decision by the Senior Financial Commissioner. The Financial Commissioners have agreed to take steps to make it clear that the latter ruling should be followed.

198. It was recently decided that petitioners in insolvency should at the time of presenting their petitions be called upon to deposit a fee of from Rs. 20 to Rs. 50 to cover the cost of issue of the necessary notices, and this order has had the effect of restraining a number of persons from instituting *mala fide* proceedings.

Value of suits.

199. The value of suits instituted fell from Rs. 3,98,31,320 to Rs. 3,90,51,102, but the average value rose from Rs. 196 to Rs. 224 in consequence of an increase in the number of suits of high value. The reasons detailed in paragraph 192 affected more especially claims for small amounts.

Disposals.

200. There were 220,220 regular suits before the Courts, of which 181,118 were disposed of, leaving a pending balance of 39,102 including 4,838 cases which could not be decided because one or other of the parties

was on active service. The corresponding figures for the previous year were 250,989, 215,964, 35,025 and 3,227. Of original suits only 28·5 per cent. were contested or referred to arbitrators, and in 77·2 per cent. of these judgment was given for the plaintiff, in whole or in part. There were also 39,207 miscellaneous cases, of which 53·5 per cent. were contested.

Appeals.

201. 14,788 appeals were presented and 14,994 decided; of these 2,701 were dismissed *in limine*, 310 transferred, and 1,033 remanded. The appeal was wholly unsuccessful in 6,916 cases, partially successful in 1,499 and wholly successful in 2,535.

Duration of suits.

202. In the year under report the average duration of contested suits was 91 days and of uncontested suits 48 days. The corresponding figures for the previous year were 80 and 40, respectively. In the Courts of Munsifs contested cases averaged 85 days as compared with 72 days.

203. The increase is explained partly by the postponement of cases on account of the War, partly by the increasing difficulty of serving processes as larger and larger numbers were recruited for the Army, and in the latter part of the year by the serious outbreak of influenza which for some time brought work practically to a standstill.

Execution.

204. The total amount realized in execution amounted to Rs. 62,55,995 as compared with Rs. 62,16,527 last year, the respective percentages being 26 and 23. The improvement appears to be due at least partly to the recent orders that stay of execution of a money-decree by an Appellate Court should not ordinarily be allowed unless the money is first paid into Court.

205. For the convenience of the Co-operative Societies of the Gurdaspur District three special bailiffs were sanctioned in order to facilitate the execution of decrees in favour of those societies; the pay of these bailiffs is met by the societies and the system appears to be working well.

Liquidation proceedings.

206. The liquidation proceedings relating to the People's and Amritsar Banks and the Lahore Spinning and Weaving Mills Co., Ltd., in liquidation, were under the supervision of the High Court during the year. There was a surplus in both the above Banks after payment of 16 annas in the rupee to the creditors. The disposal of this surplus is under consideration. Dissolution orders in connection with these Banks are awaiting the result of the appeals in the Privy Council. The principal creditor of the Lahore Spinning and Weaving Mills Company, Limited, is the People's Bank. The property of the Company has been sold for Rs. 13½ lakhs. There is a certain amount of litigation still pending, but the remaining assets are small, and it is hoped that this matter will be disposed of by an early date.

Accessibility of revenue records.

207. The special kanungos appointed for all districts except Simla to prepare excerpts from the revenue records on the application of litigants continue to be of great service to Civil Courts. As an experimental measure, confined at present to three districts, Government have sanctioned the preparation by the special kanungo of revenue excerpts on the application of persons other than litigants who have an interest in any title in land.

Stenographers.

208. The scheme for the appointment of stenographers for the Courts of District and Sessions Judges has proved very successful. These temporary appointments have now been made permanent and pensionable, and it is hoped to extend the system in time to all districts. Certain District Judges have been able to propose a reduction in their establishments as a result of this scheme.

Chief Court and High Court.

209. With the commencement of the present financial year, a High Court was established for the Punjab and Delhi under Letters Patent.

210. As pointed out in last year's report it takes about 3 years for a first or second appeal to come up for hearing by a Division Bench. The number of first appeals pending has increased steadily from 348 in 1914 to 607 in 1918. It is the heavy burden of Criminal Appellate work which makes it impossible for a Court of the present size to reduce the Civil Appellate pending file.

23.—Registration.

General Business.

211. As compared with the preceding year there was a decrease of 16 per cent. in the number and an increase of 1 per cent. in the value of compulsory registrations. The most noticeable variations were an increase of 10 per cent. in the number of gifts and decreases of 13 and 22 per cent. respectively in the number of mortgages and other leases. The causes to which variations have been generally ascribed are (1) the high prices of agricultural produce during the year under review, (2) the consequent rise in the price and renting value of land, (3) the improvement in the income of agricultural classes owing to their increased recruitment in the army, and (4) the influenza epidemic, which occurred in the last quarter of the year under review and which, on the one hand, interfered with the execution and registration of instruments and, on the other, increased the number of gifts and wills by emphasizing the precariousness of life.

212. There was a decrease of 18 per cent. in the number and an increase of 3 per cent. in the value of optional registrations affecting immovable property as compared with the previous year, due probably to the causes enumerated in the preceding paragraph. As regards the increase in value it may be mentioned that at Ferozepore a single award of the value of Rs. 9,37,773 was registered.

213. The variations in optional registrations affecting movable property, namely, a decrease of 6 per cent. in number and an increase of 9 per cent. in value call for no comment.

Land Alienation Act.

214. Thanks to the constant vigilance exercised by registering officers, efforts to evade the provisions of the Land Alienation Act are now becoming infrequent and only three cases were detected in which deeds infringing these provisions were actually registered. As regards these suitable action is being taken.

Income and Expenditure

215. Owing to the decrease in the number of registered documents receipts fell to the extent of 4 per cent. Expenditure, on the other hand, increased by a similar percentage owing chiefly to larger expenditure on establishment, leave allowances, the grant of famine and war subsidies, and a rise in the price of paper and binding material. The net profit on the operations of the Department in the year under review was Rs. 2,17,201 as compared with Rs. 2,38,289 in the preceding year.

23 (A).—Legal affairs of Government in the year 1918.

General.

216. The number of references for opinion disposed of by the Legal Remembrancer was 956 as compared with 955 in 1917 and 1,041 in 1916.

Original Suits.

217. The Secretary of State was plaintiff in 16 original suits during the year. Of these 8 were decided in favour of, and 1 against, Government ; 1 was compromised ; whilst 6 remained pending at the close of the year. Of the 8 cases decided in favour of Government, 3 were for possession of land, 1 under section 21-A of the Punjab Land Alienation Act and 4 for recovery of money. The total amount involved was Rs. 46,079-6-7. The Secretary of State was defendant in 109 original actions, including land acquisition references. Of the 10 land acquisition cases 3 were decided while 7 remained pending. The Collector's award was upheld in 2 and enhanced in 1. Of the other 99 civil suits, 41 were decided in favour of, and 15 against, Government and 1 was compromised.

218. The total amount involved was on account of—

		Rs.	A.	P.
(*a*)	Land acquisition references ...	2,24,388	8	0
(*b*)	Other cases	1,06,824	6	1
	Total ...	3,31,212	14	1

219. In class (*b*) above the total amount claimed in decided cases was Rs. 68,106, out of which only the sum of Rs. 10,441 (including costs) was decreed against Government; whilst Rs. 3,365 was awarded to Government on account of costs in cases in which the plaintiffs remained unsuccessful.

Appeals.

220. In the District Judge's court 6 appeals were filed on behalf of the Secretary of State. Of these, 5 were decided in favour of, and 1 against, Government. The Secretary of State was respondent in 10 appeals preferred to the District Judge's court, of which 6 were decided in favour of, and 2 against, Government. In the Chief Court the Secretary of State was appellant in 4 appeals, 3 appeals being decided in favour of Government, while the fourth remained pending at the close of the year. The Secretary of State was respondent in 14 appeals of which 7 appeals were decided in favour of, and 1 against, Government.

Revenue Suits.

221. No revenue suits were filed on behalf of or against Government during the year.

Criminal Courts.

222. Government Law Officers appeared in 7 Original Criminal Trials in Subordinate Courts. Of these 4 were decided in favour of, and 1 against, Government Two remained pending. Out of 1,132 Criminal appeals in the Chief Court 690 were decided in favour of, and 251 against, Government and 191 remained pending. In Subordinate Courts one appeal was decided against Government. The Crown was also successful in 137 out of 268 applications for revision, 96 being decided against it. There were 8 miscellaneous cases out of which 5 were decided in favour of Government.

24.—District and Local Boards.

General.

223. Although during the year under report which ended in March 1919 no important changes were introduced in the constitution of district boards, the preliminary steps were taken towards the initiation of extensive changes which will come into force at the elections of February 1920. The number of the members in all boards has been revised and in those where the elective system obtains, the proportion of non-official members appointed by name will in no case exceed one-fourth of the total number of non-official members and in many cases will be much less. The opportunity has also been taken to re-arrange electoral circles and it is hoped that this re-arrangement will stimulate interest by providing a more equal distribution of the voting power. Another step which should tend to foster interest in district board elections is the fact that they will in future be held simultaneously in all circles of each district as well as in all districts. This should assist in focussing the attention of voters upon the more important problems of district board policy and upon the necessity for questioning the attitude of rival candidates towards such problems. In addition to the changes mentioned above which were decided upon before the issue of the Government of India Resolution on local self-government, dated 18th May 1918, it is anticipated that as a result of the policy outlined in that resolution more extensive changes will shortly be inaugurated in the direction of introducing an elective element in boards which are at present wholly nominated, of reducing the official element in all boards and of enacting legislation to facilitate the substitution of non-official for official chairmen in the more progressive boards. The election in the Lyallpur District gives grounds for confidence in the success of the experiment, provided that the mainspring of the board's activities continues to be

intellectual and material progress and that the danger is avoided of party politics becoming the dominating factor. This view is applicable to all boards in connection with the impending changes mentioned above and the Lieutenant-Governor looks forward to seeing as a result of these changes a quickening of the interest taken by members and voters in the progress of their boards and in the general welfare of their districts.

Elections.

224. During the year under report 76 elective vacancies occurred. Of these no fewer than 56 were uncontested, while two had to be filled by nomination in the absence of a candidate for election. There is no doubt that the fact that the term of office of members now elected will be short-lived in view of the general elections to be held in February next accounts for some loss of enthusiasm. The absence of a contest, however, is by no means always an indication that the vacant seat is not keenly sought after as the withdrawal of a candidate just before the poll is a common feature of district board elections.

Working of the Boards.

225. The interest taken by members in the discussions of the board is lively, but there is less unanimity concerning the keenness displayed in the discharge of executive duties. The deliberations of the Multan board are characterized by an increasing interest, but the members are reluctant to undertake drudgery. The working of several other boards conveys a similar impression. On the other hand there is evidence of an extended employment of sub-committees with, on the whole, satisfactory results.

Finance.

226. The problems of district board finance are causing grave concern to many boards, which are finding that while their expenses rapidly increase with rising prices of labour and materials, their income remains constant and presents little scope for further development. The income derived from Government contributions is fixed and revised periodically, a system which has been devised with a view to enhancing the financial independence of the boards and teaching them to exercise foresight in the preparation of plans of expenditure over a period of years. To allow frequent revision of these fixed contributions to meet unexpected calls upon the financial resources of the boards would defeat the object at which the policy aims. The problem before the boards is therefore to tap new sources of revenue to meet their growing expenses. The maximum to which the local rate can be raised has now been attained in all but four districts of the Punjab, and few boards can look forward in the near future to any enhancement of the land revenue on which the local rate is calculated. Public opinion is rightly opposed to an increase in school fees and is apathetic regarding the charging of fees for medical attendance to the well-to-do. Some boards are resorting to the imposition of a *haisiyat* tax upon persons deriving income from property which is not subject to the local rate. In Attock such a tax came into force during the year under report. The sum assessed was Rs. 7,809 and it is anticipated that Rs. 10,000 will be realised in the current year. Karnal, Rohtak, Amritsar and Shahpur are devising similar taxes. It is doubtful, however, whether the sum which these will bring to the board will in any case be large and their object is not so much the raising of a large income as the distribution of taxation on a more equitable basis as between the agricultural and non-agricultural communities. Some boards are able to derive enhanced revenue by developing their arboricultural and similar activities, but these sources yield as a rule slow returns and in some of the dryer parts of the province the yield from arboricultural operations is small and uncertain. Taxation of railway imports and exports and roads tolls have been suggested as possible sources of income. Such indirect taxation is open to the objection that it hampers trade and is apt, in the long run, to fall upon the consumer, and more hope seems to lie in the enhancement of the existing direct taxation. The Lieutenant-Governor has recently had under consideration the desirability of enacting legislation to raise the maximum limit of the local rate to provide for the growing needs of district boards in connection with educational expenditure and district boards will shortly be given an opportunity of expressing their views on the expediency of this course.

Income.

227. The gross income of district boards during the previous year had been Rs. 83,16,600, the highest figure ever attained. This figure was, however, exceeded during the year under report by no less than 11½ lakhs, and the total income received amounted to Rs. 94,90,888. To this increase somewhat over 3 lakhs was contributed by the local rate, the proceeds of which in the Lyallpur District alone exceeded the previous year's total by nearly a lakh. Government contributions account for the greater part of the remainder, a fact which lends no colour to the grievance that some boards are inclined to urge, that the system upon which Government grants are now distributed has brought them into a difficult financial position. The total expenditure of district boards was Rs. 81,42,719, or approximately 10 lakhs in excess of that of the previous year.

228. Receipts under the head Education exceeded the previous year's total by Rs. 2 lakhs at Rs. 18,77,792. The difference is solely due to an increase in Government contributions. These amounted to slightly over Rs. 15 lakhs. School fees brought in Rs. 3,59,978, a slight increase over the preceding year. In 1917-18 the expenditure of district boards on education totalled Rs. 25,36,830. In 1918-19 it rose to Rs. 28,80,846.

229. The head Medical is credited with an income of Rs. 1,34,320, which exceeds that of 1917-18 by Rs. 23,445. The increase is almost entirely accounted for by Government contributions, but hospital receipts and sanitation receipts have both risen appreciably. Expenditure was higher at Rs. 8,59,310 as compared with Rs. 7,86,998 in the previous year. This increase was spread over various sub-heads, but owing to the influenza outbreak expenditure on plague and other epidemics increased by 50 per cent. The activities of the boards in their medical departments were in fact largely engrossed by the influenza and other epidemics and little is recorded during the year in connection with the construction of new dispensaries. Many projects for new dispensaries have, however, been sanctioned and even begun, in most cases with assistance from the special Government subsidy which was sanctioned for this purpose. In the few cases where new dispensaries were ready to be opened it is reported that sub-assistant surgeons could not be spared by the Medical Department and the opening had to be postponed. Although the system of charging fees from the well-to-do makes no headway the dispensaries are generally reported to be popular and to confer valuable advantages upon the public. A somewhat inexplicable exception is the Hoshiarpur District where it is stated that very little use is made of these institutions.

Expenditure.

230. The expenditure of boards on civil works was Rs. 32,69,638 or nearly Rs. 4½ lakhs more than in 1917-18. Though labour has continued scarce and materials costly and difficult to obtain owing to the lack of railway transport, many boards have found it impossible to defer any longer the execution of necessary new works and repairs, and some boards, for instance, Ludhiana, have worked up to the programme originally devised.

Miscellaneous.

231. Increasing attention is being paid by district boards to the establishment of demonstration farms and to the popularization of improved agricultural methods. For the latter purpose Agricultural Assistants are being entertained by some boards. The Government Cattle Farm at Hissar supplied 186 bulls to district boards during the year or 20 less than in the previous year. The Hissar District, where the presence of the Cattle Farm provides an admirable object-lesson, took the largest number, namely, 20. In addition to the Hissar bulls, boards in the Western Punjab purchased bulls of the Dhanni and Dajal breeds.

232. The only board which has bestowed any attention upon improvement in sheep breeding appears to be that of Mianwali. Some years ago this board was enterprising enough to purchase ten three-quarter bred merino rams. Of these, two have died, and the remaining eight are doing good work. This enterprise is now being justified by results.

The progeny of these rams is reported to be of conspicuous excellence and the superiority of their wool is stated to be well established.

233. Arboriculture, as a profitable source of income, is receiving ample attention from the majority of boards at a time when they can afford to leave no stone unturned to add to their resources. The entertainment of additional and more fully qualified supervising staff still awaits achievement.

234. Miscellaneous activities comprise special measures connected with the influenza epidemic, the opening of cheap grain and salt shops, and the rendering of assistance in publicity work. In publicity works the Lyallpur board, which is in many respects the most progressive in the province, has taken a leading part and the District Board Bulletin, the organ of this board, has continued to disseminate reliable news and is now issued bi-weekly. The development of local self-government in the near future will, it is hoped, be rapid, and members of district boards will not lack opportunities for the discharge, both collectively and individually, of important duties and responsibilites requiring a high standard of ability and public spirit.

25.—Municipal Administration.

General.

235. The conversion of Moga from a notified area to the status of municipality raised the number of municipal towns from 100 to 101 during the year under report and reduced the number of notified areas from 104 to 103. At the close of the year, however, three new notified areas were constituted at Mian Channu, Khanewal and Jahanian in the Multan District. The status of the Sialkot Municipality has been raised to the first class. As stated in last year's report eight municipalities were selected for the introduction or re-introduction of the elective system. The first elections took place in most of these towns during the year under report. In Bhiwani, where the elective system had been abandoned 16 years ago, the elections were keenly contested and 80 per cent. of the voters are reported to have polled. In the Western Punjab towns, there appears to have been less enthusiasm. On the whole, it may be said that the extension of the elective system to these eight municipalities has, so far as the actual elections are concerned, been successfully inaugurated, and a further extension to other towns where nomination still prevails is under contemplation. In municipalities where the elective system is not new, elections are for the most part keenly contested in the larger municipalities such as Lahore, Amritsar, Sialkot, Ludhiana and Ferozepore and in places like Karnal where they are enlivened by personal rivalries. The new system of taking votes by ballot is described as a marked improvement on the former system, and as a result of the higher qualifications fixed for members it is stated that a better and more intelligent class of candidate has been elected to this committee. In the Jullundur Division, also, vacancies were hotly contested as a rule and there is evidence, it is reported, that the introduction of new election rules has enhanced the interest taken in the elections. Elsewhere, however, and especially in the smaller towns an apathetic attitude prevails among voters ; in many cases only one candidate comes forward ; in other cases negotiations between the rival candidates lead to the withdrawal before the poll of all candidates but one ; in both these circumstances voters lose the opportunity of acquiring interest in an election, which an obligation to compare the claims of one candidate with another engenders. The dearth of suitable candidates in small towns is to a large extent inevitable, but the practice by which candidates negotiate among themselves for a vacant seat, though in doing so they may sometimes make calculations as to how if given an opportunity, the electorate would vote, is not a practice which can easily be defended from the point of view of the voter's ultimate interests.

Working of the Committees.

236. The realisation of their general responsibilities by members of municipal committees varies to some extent in proportion to the size

and importance of the town. Intrigue and faction find their most favourable breeding ground in the small municipalities, where public opinion is apathetic and exercise little restraint upon the personal idiosyncracies of the members. Another serious fault, which is also most general among the smaller communities, is a lack of initiative.

237. In regard to their statutory functions there is evidence that municipal committees are on the whole bestowing greater attention upon their efficient performance. The Punjab Adulteration of Food Act, 1919, has now become law and with the framing of rules under this Act which is in contemplation it will be possible to confer upon the larger municipal committees important powers for the control of adulterated articles of food. The question of overcrowding is pressing itself upon the attention of municipalities more and more every year and with this question is closely connected that of encroachments upon public streets, which, unless jealously restricted, are apt to trespass unduly upon light and ventilation which are already too often inadequate. It is to be feared that most committees display a reprehensible laxity in dealing with such encroachments.

Miscellaneous.

238. During the year under report Government sanctioned the resignation by the Deputy Commissioner of his membership of the Gujrat municipality and the election as president of a non-official member in his place. Since the year ended similar steps have been taken regarding the presidentship of the Hoshiarpur, Jullundur and Karnal Municipalities. The Lieutenant-Governor is satisfied that the policy of replacing official by non-official presidents of municipal committees is one which it is eminently desirable to foster and he hopes that the example of the municipalities mentioned above will be followed by many others. He is, not, however, prepared to proceed in advance of public opinion and to thrust upon municipal committees a sudden change for which their members may be unprepared and which might in some cases dislocate and hamper municipal administration.

239. Valuable assistance was rendered in combating influenza in practically every municipal town in the Province. The distribution free or at low cost of medicines, milk, food and blankets were measures commonly taken and in Lahore the municipal committee went the length of organizing travelling dispensaries. The cheap salt, grain and fuel shops which had been opened by many municipal committees continued to do good work during the year. In some towns the committee also made arrangements for the distribution of kerosine oil.

Taxation.

240. Excluding Amritsar, the municipalities of the Province realized by taxation Rs 49,11,581 compared with Rs. 42,42,594 in 1917-18, the incidence per head of population rising from Rs. 2-14-4 to Rs. 3-5-6. Terminal taxes brought in Rs. 1,07,882, nearly double the previous year's figure of Rs. 54,166, mainly owing to the addition of Lyallpur and Gujranwala to the towns where this form of tax has been adopted. Octroi receipts have risen from Rs. 37,08,664 by nearly Rs. 6 lakhs to Rs. 42,97,596. This remarkable increase had resulted from the rise in prices of articles on which octroi is assessed according to value, though some municipalities claim that more vigilant supervision has been a contributory cause.

26.—Military (Indian Defence Force).

General.

241. During the year under review there were one mounted and three unmounted Indian Defence Force units in the Province, namely :—

The 5th Punjab Light Horse, the 4th Simla Rifles, the 3rd Punjab Rifles and the 1/24th North-Western Railway Battalion, Lahore.

5th Punjab Light Horse.

242. The strength of the 5th Punjab Light Horse was greatly reduced as members belonging to the Supply and Transport Corps, as well as Police, and those medically unfit for service, were struck off the roll. The total strength of the unit on 31st March 1919 was 195.

The total number of members serving in the Indian Army Reserve of Officers was 126, the majority of whom were on active service.

4th Simla Rifles.

243. At the close of the year the 4th Simla Rifles returned a total of 473 of all ranks. The number of men on active service was 198, distributed between the Indian Army Reserve of Officers, Supply and Transport Corps and other branches of the service.

3rd Punjab Rifles.

244. The 3rd Punjab Rifles comprised 32 officers and 763 rank and file, a decrease of 27 on the previous year, primarily due to exemptions on medical grounds. During the year a further contribution of 36 members was made to the Indian Army Reserve of Officers, bringing the total so commissioned to 130, the majority of whom were on service overseas. In addition 27 members joined up for Military service the number of all ranks thus serving being raised to 351.

245. The year under report is not remarkable for any direct military assistance rendered by the Battalion. But there is no doubt that the new system of training made the Battalion more efficient as a force, and thereby enabled the Military authorities to release more of the regular army in India for service overseas.

246. Guards were found for the Headquarters Armoury at Lahore for practically the whole year, and, during the summer months, when the strength of the Headquarters Company is reduced to a minimum owing to the migration to the hills, the duty was by no means nominal.

1-24th North-Western Railway Battalion.

247. The North-Western Railway Battalion had a total strength on active service of 215, including officers and men. Twenty-six officers obtained commissions in the Indian Army Reserve of Officers and two were employed with the Machine Gun Section in East Africa. Major J. C. Hunter and Lieut W. T. Biscoe of this unit were mentioned in despatches for gallant and distinguished service in the field. At the end of 1918-19 the Corps numbered 696 of all ranks.

Non-European Sections of the I.D.F.

248. In order to encourage recruitment for the non-European section of the Indian Defence Force, a Central Committee, consisting both of officials and non-officials, was formed in Lahore. It carried on propaganda work and did the best to popularise the movement There were two branches of the Indian Section—

(*a*) The Non-University Section.

(*b*) The Punjab University Company.

Non-University Section.

249. The Non-University Section was designated the 6th Infantry of the Indian Defence Force and the limit prescribed for it was 1,000 recruits. More than 1,400 applications were received for enrolment, but most of the candidates were declared medically unfit, 663 only being accepted. Of these only 290 were actually enrolled by the Military authorities and of this number only 158 underwent military training. The figure speaks for itself.

Punjab University, Section.

250. The Punjab University Section of the Indian Defence Force was commanded by Captain A. C. Woolner, the Registrar of the Punjab University. When the University and the Principals of the local Colleges were moved to introduce military drill in their institutions, the response made by the students was satisfactory and all those who were physically fit joined the drill classes. Three hundred and forty-nine students were selected for enrolment in the University Company, but only 286 were found medically fit and finally enrolled. The Company is doing good work, and there is keen competition among the students to fill vacancies. About fifty students were enrolled this year.

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Agriculture.—(1) Report on the Operations of the Department of Agriculture, Punjab, for the year ending 30th June 1919.

(2) Annual Report of the Punjab Veterinary College, Civil Veterinary Department, Punjab, and Government Cattle Farm, Hissar, for the year 1918-19.

(3) Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1918.

(4) Report on the working of Co-operative Societies for the year ending 31st July 1919.

Fisheries.—Report on the Department of Fisheries, Punjab, for the year ending 31st May 1919.

Weather and Crops.—(1) Report on the Weather of the Punjab for the year 1918-19.

(2) Punjab Season and Crops Report for 1918-19.

Horticulture.—Report on the Lawrence Gardens, Lahore, for the year 1918-19.

Forests.—(1) Progress Report on Forest Administration in the Punjab for 1918-19.

(2) Progress Report on Arboriculture in the Punjab for the triennial period 1914-15 to 1916-17.

(3) Report on the Administration and Accounts of the District Boards in the Punjab for the year 1918-19.

(4) Land Revenue Report, as above.

Manufactures.—Report on the working of the Factories Act in the Punjab during the year 1918.

Trade.—(1) Report on the Internal Trade of the Punjab by Rail and River for the triennium 1916-17 to 1918-19.

(2) Report on the External Land Trade of the Punjab for the triennium 1916-17 to 1918-19.

(3) Report on the Joint Stock Companies in the Punjab for the year 1918-19.

Public Works.—Administration Report of the Public Works Department, Punjab, Buildings and Roads Branch, for the year 1918-19.

Irrigation.—(1) Administration Report of the Public Works Department, Punjab, Irrigation Branch, for the year 1918-19.

(2) Land Revenue Report, as above.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Agriculture.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

Forests.—Statistical Abstracts for British India, Volume II, Financial Statistics.

Crops.—(1) Agricultural Statistics of India, Volume I, Tables II and III.

(2) Estimate of Area and Yield of certain principal Crops in India.

(3) Prices and Wages in India.

(4) Variations in Indian Price Levels.

Mines and Quarries.—(1) Statistical Abstracts for British India, Volume I, Commercial Statistics.

(2) Records of the Geological Survey of India, Volume XLVII, Part 3.

(3) Report of the Chief Inspector of Mines in India.

PRODUCTION AND DISTRIBUTION.

Manufactures.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

Trade.—(1) Inland Trade (Rail and River borne) of India.

(2) Statistical Abstracts for British India, Volume I, Commercial Statistics.

Railways.—Administration Report on Railways in India for the year 1918-19.

Irrigation.—Statistical Abstracts for British India, Volume I, Commercial Statistics.

27.—Agriculture.

Scientific.

General.

251. One new extra Assistant Director of Agriculture and two extra Agricultural Assistants were sanctioned for "bara" reclamation work, while two posts of Agricultural Assistants were converted into gazetted rank as assistants to the Economic Botanist and the Agricultural Chemist respectively, and 15 new posts were added to the cadre of Agricultural Assistants.

Lyallpur College.

252. There is a steady increase in the number of applications for admission to the College, there being 265 applications this year as against 225 in the one preceding it. For the first time in the history of the College, the majority of the applicants were agriculturists. 32 students entered on the vernacular course, and the Rural Economy class for Revenue and Irrigation Officers, which was in abeyance in 1917-18, re-opened with 13 students, while to the Teachers' class, started last year, another batch of 20 students was admitted. A new addition is a short farmer's course of about 10 days' duration in which the main subject of instruction is the handling of the implements turned out at the Farm.

253. Proposals for enlarging the staff so as to enable it to cope with increasing work at the college are under contemplation, and a scheme for the extension of the Chemical block to accommodate the Soil Physicist, the Bactereologist and the 2nd Agricultural Chemist, plus the addition of new wings for the 2nd Economic Botanist, the Professor of Rural Economics, and the Entomologist, is also being examined.

254. A 9-inch diameter tube well to give the college an independent water supply has been sanctioned. A proposal to acquire by acquisition an additional area of 273 acres is under consideration.

Experiment and Research.

255. The Narwala Farm of 130 acres, reclaimed by the late Mr. Barnes, is showing signs of relapse, *reh* having re-appeared in rather over two acres of land. The progress of the deterioration is being carefully watched. "Bara" reclamation work in the Lower Bari Doab Canal Colony is being carried on and certain suggestive results have been obtained. Other important experiments conducted by the Agricultural Chemist relate to green manuring and the continuation of the work on nitrogen fixation in the fallow soils.

256. The Economic Botanist has continued his work on cottons and wheats. A new selection of American Cotton No. 285-F has afforded better results than 4-F—the most popular variety with the zamindars at present—and has been valued by Volkart Brothers at 10 per cent. above 4-F and by the British Cotton Growing Association at 4*d* a pound above American middling. In regard to wheat preliminary investigations into the milling and baking qualities of prominent types have been carried out at the Delhi Flour Mills and their relative values from a baker's point of view ascertained.

257. Experiments with Scotch potatoes in the Simla Hills continue and the date palm plantations at Taleri Bag, Muzaffargarh, are doing well.

Sericulture and Entomology.

258. Owing to the effect of change of temperature on the long voyage from France and the short period of hibernation due to late arrival of the silk worm seed the hatchings were only from 15 to 20 per cent. The

crop has been poor, but possibly on account of short supply very high prices have been offered for the small amount of cocoons sold, *viz.*, Rs. 190 to Rs. 200 a maund, as compared with Rs. 120 to Rs. 140 a maund realised last year. This fact, coupled with the appointment of a wholetime Entomologist, will, it is hoped, place on a sound footing the silk worm industry in the province. Both in the Lower Chenab Canal and the Lyallpur Farm bollworm attacked indigenous more than American Cottons. Parasite boxes were distributed in several districts. Mango trees in the Shalamar Gardens, Lahore, were protected from Monophlebus bugs by oil and cotton banding while good work was done in destroying Euphalerus at Sargodha and Gujranwala.

Agricultural Engineering.

259. There has been a slight increase in the number of wells bored during the year (349 wells as against 327), and the percentage of success has risen from 74·4 to 77·6. The high prices of material, the stoppage of goods traffic, the influenza epidemic, and the depletion of staff all militated against any rapid progress in this line of work.

260. Tube well installation work was practically at a standstill owing to the deputation of the trained mechanic borers and the transfer of three sets of boring plant to Persia.

261. Much useful work has been done by the Agricultural Engineer in inventing a new type of cultivator tine, adjustable without the use of bolts or nuts.

Implements.

262. The set back originating in 1917-18 became still pronounced during this year, only 396 imported implements having been sold as against 725 last year. On the other hand 668 implements manufactured by the Department were disposed of. But for the increased price of agricultural implements there seems little doubt that by now they would have been selling in thousands.

Experimental Farms.

263. Various experiments are being carried out at Lyallpur, Gurdaspur, Sargodha, and Hansi Farms. They consist in the testing of different types of important crops of the province, such as wheat, cotton, and sugarcane. The data from these different experiments with brief notes on them have been carefully recorded.

Demonstration work.

264. Land for demonstration farms has been notified for acquisition at Ludhiana, Hoshiarpur, Sialkot and Amritsar. Altogether a sum of Rs. 2,25,000 has been ear-marked by Government from wheat profits for initial expenditure on such farms, of which Rs. 1,54,476 have so far been allotted.

265. The system of demonstration plots referred to in paragraph 256 of last year's report has continued to work satisfactorily and agricultural association meetings have been held in 8 districts.

Miscellaneous.

266. (*a*) *Field Trials.*—The problem of the standard errors of field trials, which is of the utmost importance in deciding whether differences of yield in varietal tests are significant or not, has been carefully studied by the Deputy Director of Agriculture and the results obtained by him are being considered.

(*b*) *Crop Forecasts.*—The whole work of issuing official crop forecasts has been taken over from the Director of Land Records, Punjab. Government has sanctioned for a period of six months a staff of one Naib-Tahsildar and three computers for work on the correlations of areas and yields of crop with rainfall, prices and the like.

(*c*) *Aeroplane Photography.*—The Director has, in co-operation with the Director of Aeronautics, initiated experiments in aerial photography for the purpose of crop surveys. A series of photographs has already been taken and arrangements are being made to secure better cameras and to experiment with various colour screens which are expected to yield more instructive results.

PRODUCTION AND DISTRIBUTION.

Storage and Distribution of Seed.

267. The purchase and sale of good cotton and wheat seed continues to be a very important part of the Department's work. The allotment from wheat profits for this purpose was Rs. 3,56,000.

Cotton.

268. The estimates of the area sown with 4-F American cotton in the colonies compared with the last year's sowings are:—

	1918.	*1919.*
Lower Chenab Canal	190,000	200,000
Lower Jhelum Canal	16,000	60,000
Lower Bari Doab Canal	173,000	235,000
Chunian Colony	10,000	10,000
Upper Jhelum Canal	1,000	6,000
	390,000	511,000

269. A proposal has been made in the Bombay market to make Punjab American tenderable against a Broach contract. The fixing of cotton standards is one of the recommendations of the Cotton Committee and will, it is hoped, enable the zamindar to get his proper premium for Punjab American.

270. In all 12 cotton auctions were held under the ægis of the Agricultural Department and 3 under that of the Co-operative Credit Societies, at which 122,000 maunds of cotton were sold at prices varying from Rs. 17-5-0 to 24-12-0 per maund.

Wheat.

271. Punjab 11 continues to be the most popular wheat in the canal colonies. The figures of area under this wheat compared with 1916-17 and 1917-18 sowings are:—

	1916-17.	*1917-18.*	*1918-19.*
Lower Chenab Canal	60,000	100,000	150,000
Lower Jhelum Canal	22,000	45,000	50,000
Lower Bari Doab Canal	15,000	50,000	100,000
Upper Chenab Canal	*Nil*	1,500	2,500
	97,000	196,500	302,500

Assuming roughly that Punjab 11 gives one maund per acre more than the mixed varieties it has replaced, the 1918-19 crop was 60,000 maunds greater than it would have been without the distribution of this form of seed.

Chari.

272. The sale of *chari* seed was a special measure designed to secure a sufficiency of seed at sowing time at reasonable prices, the market price of *jawar* seed having risen last year to Rs. 20 a maund. 6,000 maunds of seed were imported of which the Department sold only 400 maunds, but the main object of the import, the providing of cheap seed, was secured. When the consignment arrived, prices, after having been as high as Rs. 12 to Rs. 14 a maund, dropped to Rs. 9 or Rs. 10 a maund and in a week fell to half this figure. The full reasons for this extraordinary movement in prices cannot be determined, but it seems clear that the local dealers intended making a profiteering coup and were foiled by this measure. The consequent loss to Government amounted to about Rs. 25,000, but the experiment should serve as an object-lesson of the value of co-operative purchase of seed.

Seed godowns.

273. A seed godown for a co-operative store society to hold 5,000 maunds has been built at Shakargarh out of a loan of Rs. 8,000 from wheat profits and a proposal to build another small seed godown of 800 maunds at Kala Afghanan is being considered.

Elevators.

274. There is a possibility of the Lyallpur elevator being ready for work in May next to receive the 1920 crop. Proposals relating to the general scheme for the provision of elevators for the province are under consideration.

Co-operative Societies.

General.

275. Under this head a widespread awakening of interest is the most striking feature of the year. Even the Dera Ghazi Khan district, the one entirely barren field that remained, can now boast half a dozen societies with the promise of more, while at the other end of the Province, in Gurgaon, the number of societies has jumped from 10 to 88. The case of Ferozepore is even more remarkable. 181 new societies have been opened and many more applications are pending. Altogether 1,262 new village credit societies have been constituted while 300 applications were pending at the end of the year. There is now not a single district in the Province which is not moving forward, a fact which may almost be said to open a new chapter in the economic history of the Punjab.

Supply Societies.

276. A second feature that has marked the year is the development of supply, or more accurately, distribution societies. High prices and profiteering stimulated action and 187 supply unions and societies have been started. 93 of the latter are in towns, where a year ago, thanks to the generous provision by Government of a special staff, work was systematically inaugurated. In the villages, where the profiteer has hitherto had the field to himself, the wholesale supply of salt, cloth and oil has had a widespread effect and has done more than any thing else to bring home to the ordinary cultivator the material advantages of co-operation. As the economic situation did not admit of delay, existing credit societies had to be utilised as the chief agencies of supply, but credit societies are being rapidly combined into supply unions. 74 of these have already been formed and many more are under consideration. No new stores have so far been opened, but several are in contemplation, and there is, chiefly amongst those who do not appreciate their peculiar difficulties in India, a strengthening demand for them.

New forms of co-operation.

277. The establishment of such societies imposes heavy duties upon the staff who have, in the initial stages, to arrange for everything from the collection of indents to the final distribution of goods. The result is that there have been few attempts at new forms of co-operation which demand much time for preliminary enquiry and teaching. In the Gurdaspur district, however, where there are now a large Central Bank, 10 Banking Unions and nearly 600 village societies, some interesting experiments are being made. A Co-operative Dispensary society has been registered and building is about to begin. The Shakargarh Commission Shop Society has completed its 11,000 maund godown and has stored in it nearly 7,000 maunds of wheat. The milk society, opened last year and the first of its kind, proved a failure owing to bad management, but another has been formed and has made a good start. A society for the sale of baskets is on the point of beginning work, and a poultry society (at present unregistered) is supplying a local society in Dalhousie with eggs. An old but progressive credit society in which shares are fully paid has agreed to compulsory annual deposits for specified objects. All through the rains last year the members of 16 Gujar Societies, situated in a malarial tract, were given quinine twice a week with excellent effect by two itinerating Sub-Assistant Surgeons who worked with great tact and patience. Seven demonstration plots were arranged for the spring harvest and gave most satisfactory results. One hundred improved implements have been sold and the largest Banking Union in the district (Kala Afghanan) has decided to build a small godown for the storage of selected seed. Another Union (Gumtala), in the comparatively neglected tahsil of Shakargarh, has collected Rs. 5,162 for a Vernacular Middle School which is now open. The latest, and perhaps the most interesting experiment in the district, is a first attempt at co-operative tree-planting to increase the supply of timber and fuel, both of which are becoming scarce. The Presidents of two Banking Unions have each given a *kanal* of land for nurseries and both plots have been sown with *shisham* seed. 300 eucalyptus trees have also been distributed and the village of Bhabra has planted its waste land with nearly 400 *dhak* trees. Had more been available another village would have done the

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same. The record of this one district shows what can be done where co-operation is thoroughly alive.

278. Elsewhere the most important experiment is the formation of a small group of Cattle Insurance Societies in the Rohtak District. Another has also been formed at Madar in Jullundur. The sweepers of Rawalpindi have opened a credit society which is the first of its kind. Similarly in Gurdaspur a number of fishermen have, after much persuasion, agreed to do the same. Nine credit societies have been formed amongst the miners of the Khewra Salt Mines. In Karnal an ordinary village society stores and sells its members' grain while in Attock an oilmen's credit society deals in oil and oilcake jointly. There are now 52 credit societies in which village menials (*kamins*) predominate. Most of them are doing well—a few exceptionally well.

279. In connection with the new types of society started last year there is little progress to record. The fodder scarcity of the cold weather brought the operations of the three *ghi* societies of Karnal to a standstill and work is only now being resumed. Another *ghi* society started this year in Lahore met with a similar check. Of the 31 societies started last year for the sale of cotton only three did any work. These societies were started prematurely, and it is doubtful whether they will survive.

Position of older societies.

280. There are signs of unmistakable progress among the older societies. The number of those classed A (first-rate) and B (good) has risen in 2 years from 37 to 47 per cent. Districts like Lyallpur and Gujranwala, which three years ago were in dangerous case, have shown remarkable improvement. Hopeless societies are under liquidation and most of the others are now out of the wood. Committees no longer take the bulk of the loans for themselves and fictitious recoveries, once widely prevalent, have almost ceased. During the last 2 years the recoveries of primary societies have risen from 28 per cent. of the amount on loan at the beginning of the year to 34 per cent. In the same period their deposits with central societies have increased from Rs. 3 lakhs to well over Rs. 10 lakhs. Several village societies have been able to make deposits of over Rs. 50,000. One Lyallpur society of 185 members has deposited as much as Rs. 78,000. Share capital and reserve now stand at about 90 lakhs out of a total working capital of Rs. 153 lakhs. Indebtedness is steadily decreasing. In the older districts the desire for education is strengthening and even a border district like Attock can show a society which has started a night school for its score of members.

Statistics.

281. The following figures illustrate very roughly some results of the year's working :—

Class.	*On 31st July 1918.*			*On 31st July 1919.*		
	Societies.	Members.	Working capital.	Societies.	Members.	Working capital.
			Rs.			Rs.
Central ...	45	4,866	56,16,995	57	5,701	71,75,216
Agricultural ...	3,937	125,040	1,37,52,460	5,228	149,040	1,55,21,099
Non-agricultural ...	45	5,063	3,97,969	172	13,264	5,39,560
Cattle Insurance ...	1	58	157	8	301	852
Total ...	4,028	135,027	1,97,67,581	5,465	168,306	23,236,727

Note—To calculate the actual number of individual members about 7,000 should be deducted on account of members—societies (4,800) and individuals (approximately 2,200)—who are members of more than one society.

Cap tal.

282. The capital owned by members of Agricultural Primary Societies in lakhs is:—

	(*Lakhs of rupees.*)
Shares	50·27
Reserve	39·36
Net profits accrued	9·03
Total	98·66
Less interest not realised	6·09 (round).
Roughly	93

As loans to members total 122 lakhs, the net indebtedness of societies is only 29 lakhs. This is 14 lakhs less than two years ago, though in the interval credit societies have increased by 1,671. Including members' deposits, which have begun again to rise, societies now own 64 per cent. of their total working capital (153 lakhs).

Arrears.

283. Out of 3,374 societies that have been classified 492 are still classed as D (bad) and 1,280 more are C (weak). The consequence of this may be seen in the fact that proceedings had to be taken against 5,414 defaulters, and that over 6 lakhs of interest are in arrears. These figures doubtless represent serious defects, but compared with last year when 11,783 persons were dealt with and nearly ten lakhs of interest were in arrears they show improvement. It would, however, be idle to deny that evils exist. In too many cases of the older societies there is only one, or at most two men who do any real work. General meetings are apt to be held at long intervals with the inevitable result that members become apathetic. In most of the weaker societies dealings with money-lenders continue, and even some of the better class are not entirely above this. Probably these defects can never be entirely eradicated, but with regular inspection and assiduous teaching they can to a large extent be mitigated.

Central Banks and Banking Unions.

284. One new Central Bank (Gurgaon) and ten Banking Unions have been opened during the year, making a total of 55 Central Credit Societies for the Province. Recoveries this year have been unusually good, amounting in the case of old societies to nearly 50 per cent. of the amount on loan at the beginning of the year. Last year the corresponding percentage was only 35.

285. Financially the position of the Central Banks is unusually strong. Paid-up capital and reserve form 22 per cent. of their liabilities. This is about the same as Bombay and better than any other major province, except the United Provinces. The Committee on co-operation recommended a proportion of 1 to 8. This is the exact proportion in the case of Banking Unichs.

District Conferences.

286. Probably the most important new departure made during the year is the holding of 13 District Conferences. The whole experiment has proved an unqualified success. 100 to 150 representatives attended each meeting and keen interest was displayed in a large variety of subjects. No one who was present at these conferences could fail to be struck by

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the stimulating effect of co-operation upon the shrewd but unlettered mind of the better type of agriculturist. It is slowly but surely teaching him to think for himself, and is giving him the courage and the opportunity to express his point of view. In view of impending political changes this is of obvious importance and may prove the starting point of a co-operative movement at once self-controlled and self-directed.

Punjab Co-operative Union.

287. The Punjab Co-operative Union which was formed last year primarily to control the Audit Fund is still in its initial stages. Many central societies, not perhaps realising its potentialities, have been slow in joining it. Efforts to remedy this and make it thoroughly representative are now being made. It should then be possible to entrust to it full control of the Audit Fund and gradually to make it the centre of co-operation in the Punjab.

Results.

288. Moral progress is less easily gauged, yet here too progress would seem to be considerable. Litigation and extravagance are both diminishing. A good instance in respect of the former is a Gujar Panchayat in the Gurdaspur District which in four or five years has settled 263 petty disputes, many of which must otherwise have been taken to the courts. Of diminishing extravagance the Arains of the Lahore District provide an excellent example. A special bye-law has been adopted by many societies in the district prohibiting certain specified forms of ceremonial extravagance. Thrice in seven years has a penalty of Rs. 100 been exacted for breach of the bye-law; and this year three fines of Rs. 10 or Rs. 15 each have been imposed. More business-like habits are also slowly being formed, and in some cases with such success that it is reported of a Hoshiarpur society that "some of the members handle the cash book and the ledger with as much facility as they handle the plough." It is not surprising therefore that in many districts a general desire for education is springing up. As already mentioned over Rs. 5,000 were subscribed by a Union in Gurdaspur for a Middle School. Another Union in the same district collected Rs. 1,550 for a similar purpose. In both cases land has been given free. In Gujrat 55 societies have pledged themselves to maintain an annual scholarship of Rs. 10(for the secondary education of the sons of poor co-operators. Nor is medical relief entirely forgotten. During the influenza epidemic two Jullundur societies subscribed Rs. 450 for medical assistance and a Ferozepore society Rs. 185. In some areas there has undoubtedly been a decrease of crime. Several villages in the Sirsa Sub-Division, that a few years ago had a most unenviable reputation, have now good societies and are no longer badly spoken of. Even women are beginning to be affected by co-operation. There is a Gujrat society with a woman as Treasurer, and from another district an application has been received for the registration of a society consisting entirely of women, all Christians.

VETERINARY AND LIVE STOCK.

General.

289. Despite the dryness and heat prevailing in the summer of 1918, contagious cattle diseases were responsible for nearly 28,794 deaths. Seventy per cent. of these were due to rinderpest, a very striking result when it is remembered that in no previous year (since 1911-12) did deaths from rinderpest exceed more than 50 per cent. of the total cattle mortality and generally returned a much lower percentage. Inoculations for rinderpest numbered 106,393 or more than double the average of the previous quinquennium. It is doubtful, however, whether taken by itself the ratio between the number of deaths in a widespread epidemic, and the number of preventive inoculations performed after the outbreak has occurred can be expected to yield instructive results. The lavish use of serum as an educative agent would, indeed, appear to be of less present importance than a scientific study of the circumstances in which its use is of economic value.

290. The following table gives a comparison of disease in recent years :—

Deaths from contagious diseases.

Year.	Equines.	Bovines.				
		Rinderpest.	Foot and mouth.	Hæmorrhagic septicæmia.	Black quarter.	Inoculation for rinderpest.
1911-12	59	9,300	684	10,900	1,914	32,000
1912-13	71	12,900	828	8,700	868	18,000
1913-14	42	12,700	706	10,700	733	29,000
1914-15	338	7,300	521	19,500	2,007	30,000
1915-16	73	2,400	675	7,100	1,415	26,000
1916-17	178	15,000	512	10,700	1,087	81,000
1917-18	1,369	8,500	1,295	13,400	2,609	66,000
1918-19	83	20,800	536	5,300	608	106,000

The figures suggest that cattle disease has not decreased in the last decade. The freedom of equines from fatal contagious disease is remarkable, and the only conclusion seems to be that they die mainly of old age or overwork.

291. The mortality due to diseases other than rinderpest was much lower than usual owing largely to the dry character of the year. In the case of black quarter, however, the great reduction of mortality is attributed to the vigorous vaccination campaign carried on in the Chakwal and Talagang Tahsils, where there had been a severe epidemic in 1917-18.

Veterinary College.

292. As was the case last year the College was very short handed. Seventy-eight students were admitted to the College during the year compared with 85 in the previous year. Of these only 26 were Punjab civil students, while the qualifications of the majority of those admitted left much to be desired. It is intended to re-open next November the Post Graduate Class which was discontinued owing to the war. The examination results of the College were effected by the influenza epidemic as well as by the general dislocation due to the April disturbances. Useful work has, as usual, been accomplished in the hospital attached to the College, and evidence continues to accumulate of the success of the anti-rabic inoculation of dogs.

Veterinary Hospitals.

293. The number of Veterinary Hospitals has increased by two since last year and now stands at 129. It is proposed to make a substantial grant from the wheat profits for the extension of hospital accommodation, but the shortage of staff at present militates against rapid progress in the provision of hospitals and dispensaries. The number of animals treated at the hospitals of the province totalled 291,985, a decline of 70,000 as compared with the preceding year. As in so many other branches of the administration, the influenza epidemic was mainly responsible for this diminished outturn of work.

Cattle-breeding.

294. Cattle-breeding proceeds steadily and there are now 1,265 stud bulls in the province as against 1,000 in the previous year. A scheme for subsidising selected owners of Dhanni bulls was approved by Government during the year. Some progress has also been made in the popularisation of three-quarter and half-bred merino rams, the Hissar Cattle Farm having supplied 105 rams, all but one of which were taken by private persons.

GOVERNMENT CATTLE FARM, HISSAR.

295. The Hissar Cattle Farm enjoyed a healthy and prosperous year. The rainfall, though seasonable, was scanty and resulted in a dearth of fodder but comparative immunity from disease. The question of fodder storage will come under the consideration of a committee which the Government of India is about to assemble. Stall feeding had to be largely resorted to, and the foresight with which substantial additions were made to the fodder reserve in the preceding year was thus amply justified by events.

296. The only contagious diseases that gave trouble were black quarter, rinderpest, and foot and mouth disease. Careful management, however, reduced losses to a minimum.

297. Five more Arab mares and one stallion were purchased at the close of the year and it is hoped that in the course of time the farm will be able to provide all the Arab stallions required by the Province.

298. Large sales of stock at high prices, especially to the Brazilian Government, realised the record sum of Rs. 1,34,787, while the profit and loss account showed a satisfactory surplus of Rs. 11,534 on the year's working.

27-A.—Fisheries.

299. Rules for the regulation of fishing are now in force in the Kangra, Gurdaspur (Beas section), Amritsar, Hoshiarpur, and Jullundur districts. A detailed scheme for the extension of the Fisheries Department is under the consideration of Government.

300. The Madhopur and Sirkian projects, referred to in paragraph 281 of last year's report, did not prove successful and were really on too small a scale to show definite results.

301. Trout-cultural operations in Kulu progressed very satisfactorily and the yield of ova and fry again exceeded that of previous years. Ova were sent to Chamba, Mandi and Kangra and the two streams in Kangra in which ova were planted last year received another consignment of nearly 60,000 ova.

28.—Weather and Crops.

Character of the season.

302. The present report deals with the autumn harvest of 1918 and the spring harvest of 1919; and the period which has to be considered in connection with these harvests extends from the beginning of January 1918 up to the end of May 1919. The former month may be considered to be the earliest month the rainfall of which affects the sowings of the autumn harvest and the latter the latest month influencing the yield of the spring harvest. The months of January and February 1918 were unusually dry. In the beginning of March light rain fell over the greater portion of the Province followed in the second half of that month and the first half of April by fairly heavy rain in the central and sub-montane districts and light to moderate rain elsewhere. This rain helped the sowings of cane and cotton. The second half of April and the whole of May were, however, practically rainless and thus the time available for the sowing of these crops was more restricted than usual. Light showers fell in June, but were generally insufficient to help sowings or to benefit the crops already in the ground. The monsoon was extremely weak in July and the first half of August, but became more active in the latter half of August and, lasting till the 3rd of September, gave frequent rain, chiefly in the northern and southern districts. After this date there was little or no rain, though ordinarily the monsoon persists till about the middle of September. The months of October and November were

practically dry. Sowings were thus generally restricted and the standing autumn crops suffered in many places through the insufficiency of the monsoon rains Some rain was received in the second week of December in all the districts of the Province, except those in the south-east and helped the sugarcane, the only autumn crop still standing. Advantage was also taken of this rain to resume *rabi* sowings. A period of dry weather then ensued and lasted till the end of January when there was a substantial fall of rain throughout the Province, the rainfall of the month being above the average in every district, except Dera Ghazi Khan. The standing *rabi* crops derived much benefit from this rain. The weather was generally dry during the last week of February and the first three weeks of March. During the last week of March, however, there was light but fairly general rain which was of value, not only to the standing crops but to the extra *rabi* sowings. Some rain accompanied in places by hail and high winds was received in April and the first half of May, but did no appreciable damage.

303. The total rainfall of the year was very much below the average in all districts, except Simla, where it was slightly in excess. The distribution of the rainfall over the different parts of the year also left much to be desired. It might be mentioned in this connection that the Deputy Commissioner of Ambala notes that on an examination of the rainfall statistics of the headquarters of his district since 1862 he finds that in no single year was there less than 2½ inches of rain in July till 1918 when the fall was less than ¾ths of an inch. Climatic conditions were thus unfavourable for both the sowing and the maturing of the autumn crop and for the sowing of the spring crops. Sowing operations were also considerably interfered with in the case of the latter by the severe epidemic of influenza which occurred when these operations were in progress. In the preceding year the autumn crops suffered serious damage from excessive rains, but the spring crops were satisfactory. The supply of water in canals was rather scanty as rivers generally ran low and inundation canals opened later and closed earlier than usual. The quantity of water brought down by hill streams was also comparatively small.

304. The total area sown decreased by 34 per cent. as compared with the preceding year and 22 per cent. as compared with the normal. Unirrigated sowings dropped by 55 per cent. as compared with the former and 45 per cent. as compared with the latter. Similar comparisons for irrigated sowings show increases of 6 or 16 per cent., respectively. The total area matured was less by 39 per cent. as compared with the preceding year and 28 per cent. as compared with the normal. The proportion of irrigated sowings was 56 per cent. as against 35 per cent. in the preceding year and 37 per cent. the normal proportion. Sown and cropped areas.

305. Owing to the necessity of putting an unusually larger area under fodder crops and the favourable conditions for the sowing of the extra *rabi* crops an increase of 27 per cent., as compared with the preceding year, occurred in the area sown more than once in the same harvest. Of the total irrigated area 62 per cent. was watered by Government and the rest by private canals and from other sources. The corresponding percentage of last year was 67.

306. The total area sown under wheat declined from 9,925,795 to 7,684,420 acres—a decrease of 23 per cent. as compared with the preceding year, and of 10 per cent. as compared with the normal. The decrease was confined to the unirrigated area, the irrigated area showing an increase of 2 per cent. as compared with the preceding year. As already stated the winter rains were insufficient for the maturing of the crop in the south-east. The total outturn (taking into account the revised figures reported from some of the districts after the submission of the final forecast) works out as 2,614,398 tons, or 1 per cent. above the normal. Chief staples.

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307. The total outturn of the other principal crops as compared with the estimated normal outturn is given below :—

Name of crop.		*Total outturn in percentage on estimated normal.*
Rice	...	116
Barley	...	105
Jowar	...	22
Bajra	...	32
Maize	...	93
Gram	...	59
Rabi oilseeds	...	63
Sugarcane	...	107
Cotton	...	129

Prices.

308. Owing to the unsatisfactory outturn, the increased demand for export and the restrictions on goods traffic prices were considerably higher in the year under report than in the preceding year. The most remarkable increases occurred in the prices of *jowar, bajra* and rapeseed which rose respectively from Rs. 3-7-0, Rs. 3-2-0, Rs. 4-7-0 to Rs. 7-4-0, Rs. 6-14-0 and Rs. 10-7-0 per maund. The price of wheat advanced from Rs. 3-15-0 to Rs. 5-9-0, of *gur* from Rs. 5-1-0 to Rs. 7-14-0 and of cotton from Rs. 12-1-0 to Rs. 14-14-0 per maund. In the case of the other food-grains the increases varied from 54 to 85 per cent. Exports of gram, *jowar, bajra* and cotton and imports of rice and sugar were heavier in the year under report than in the previous year.

Stocks.

309. Stocks of food-grains were reported to be generally sufficient. In Ambala and Mianwali it was alleged that stocks were being held up to keep prices high.

29.—Horticulture.

Lawrence Gardens, Lahore.

310. During the year under report sales brought in an income of Rs. 24,377, involving a small deficit of Rs. 882. With the removal of the embargo on the export of bulbs and seeds from Great Britain, however, a substantial increase in receipts may be anticipated.

311. The chief improvement effected during the year has been the levelling of the brick-kiln opposite the gate of Government House. The removal of this unsightly mound has greatly enhanced the appearance of the Lawrence Gardens.

312. Twenty-four boys joined the Arboriculture class as compared with 31, the previous year, the average attendance being 21.

30.—Forests.

Alteration in area.

313. The area controlled by the Forest Department was reduced by 29 square miles to 7,045 square miles, the decrease being chiefly due to the disforestation of irrigable land for colonization purposes. The classification of the forests is now as follows :—

	Square miles.
Reserved	1,747
Protected	4,169
Unclassed	767
Leased	362
Total	7,045

The actual area under forest growth remained practically the same as last year, since most of the areas surrendered were classed as waste lands

PRODUCTION AND DISTRIBUTION.

Forest Settlements.

314. No new areas were finally settled during the year; but 200 acres of Rakh Khushab in Chenab Division were proposed for reservation. All the necessary works connected with the Kangra Forest Settlement were completed during the year. Orders were received from Government that the settlement of the Sutlej Valley forests in Bashahr State should be extended to the high-lying pine and fir forests, which have hitherto not been demarcated; but, as the whole of the Divisional staff was engaged on the extraction of timber for war purposes, nothing could be done during the year beyond the verification of certain records.

Working Plans.

315. All the field work for the revision of the Kulu and Kangra working plans was finished during the year and the plans will be completed shortly. The revised working plan for Shahdara was passed by the Inspector-General of Forests. A revision of the Bashahr and Chamba plans is urgently needed, but owing to the shortage of officers nothing can be done at present. Similarly in the Simla Hill States many of the working plans, notably for Jubbal and Tharoch States, are out of date and need early revision.

316. A 5-year felling scheme for the fir forests of Kumharsain State was prepared and approved, and felling schemes for the *chil* forests of Bhajji and Tharoch States were also drawn up, though not sanctioned before the end of the year. The browsing schemes for the 53rd and 54th Silladar Camel Corps are still in abeyance pending the reduction of the corps to a peace footing.

Protection.

317. The total number of forest offences reported was 8,269 as compared with 7,798 last year and 9,222 the average of the past 3 years. The increase of 471 over last year amounts to 6 per cent. and is to be ascribed mainly to the failure of the monsoon in 1918 which caused a severe fodder famine and a consequent increase in cases of illicit grazing and lopping. The total area of forest burnt was 29,952 acres, as compared with 11,796 acres last year. Climatically the year was an unfavourable one for fire protection owing to the scantiness of the 1918 monsoon, the consequent dry autumn, and the fierce heat of the early summer of 1919. The year's record was therefore not unsatisfactory except as regards the Kangra Division. For the fourth year in succession the villagers of the two Rawalpindi Divisions have co-operated with the Department in carrying out the departmental firing prescribed in the working plan and in protecting the *chir* forests during the fire season. Only 644 acres were burnt in the two divisions in 43 fires, showing that, as a rule, the fires were quickly extinguished. In Multan 2,038 acres of Alipur Range forests, containing great, quantities of *kana* grass, were burnt. In Kangra Division 9,400 acres were burnt in 105 fires. The Hamirpur Range in particular suffered severely from what appears to have been an outburst of wilful incendiarism on the part of the people. The snowfall was particularly heavy in the higher hills and caused a great deal of snow break, while avalanches were exceptionally destructive in Kanawar. Owing to the failure of the monsoon there was heavy mortality among seedlings in the Chenab and Jhelum Divisions; and the long continued drought completely destroyed the grass crop in those two divisions as well as in the parts of the Rawalpindi Division, besides retarding the growth of the forests as a whole.

Natural and artificial reproduction.

318. For the first time since 1912 there was an excellent crop of *deodar* seed in Bashahr, Kulu and Simla. In Rawalpindi for the second year in succession there was practically no *chil* seed; elsewhere the crop was average to poor; and the same may be said of blue pine, spruce and silver fir. In Kangra the oaks seeded well as did *shisham* in the plains divisions. The *deodar* seed germinated profusely, and the resulting seedlings are reported to be doing well, except in the arid regions of Kanawar, where they suffered from drought. In Kulu excellent progress has been made in the areas under regeneration. In Rawalpindi, thanks to four years' practical immunity from fires, the seedlings of previous years are

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doing very well. The prospects of reproduction here are very promising. As regards blue pine and fir, there is nothing special to report : the forests of the former are, generally speaking, full of seedlings. In Kangra bamboo forests there is little reproduction by seed, though a certain number of clumps flower every year. The crop of new culms this year was deficient owing presumably to the failure of the monsoon. Coppice reproduction of all species worked on that system was generally satisfactory throughout the province, though the development of the shoots was retarded by lack of rain.

319. An area of 1,575 acres was sown up in the 5 new irrigated plantations, the total being thus raised to 6,123 acres. The year's sowings were as usual generally successful, except in *kallar* soil. Up to the end of the year the total expenditure incurred on and the revenue derived from these new plantations have been Rs. 2,22,861 and Rs. 2,78,417, respectively.

Exploitation.

320. The total area worked over under the different systems of management was 55,422 acres, as compared with 63,969 acres last year. The decrease in the area worked under the uniform method is due to the fact that owing to the scarcity of labour the areas already under regeneration in the Rawalpindi Division could not be completely worked out and so new areas were not taken up. Special fellings for military purposes ceased to be required after the termination of hostilities and this accounts for the reduction under selection and unregulated fellings. The total outturn of all classes of produce as compared with the figures of the previous three years is given below :—

	Timber, c.ft. solid.	*Firewood, c.ft. solid.*	*Minor produce, value Rs.*
1918-19	7,243,000	27,158,000	25,16,879
Average 1915-16 to 1917-18	8,878,000	27,960,000	24,00,916

321. There was an increase in the departmental extraction of timber in Bashahr and Rawalpindi, owing to the heavy demands from the Munitions Board and the Railways, but on the other hand there was a large decrease in the removals by purchasers in Bashahr and Kangra Divisions due to the reversion to departmental working. The decrease in the departmental extraction of firewood occurred chiefly in Lahore Division and was due to labour difficulties. The explanation of the large increase in the outturn of minor produce is to be found in the larger extraction of bamboos in Kangra for military requirements, and also in the increased extraction of resin in Kangra and the two Rawalpindi Divisions.

322. For the extraction of resin 713,427 blazes were tapped, yielding 32,247 maunds net of resin. 28,778 maunds of resin, including 2,632 maunds on behalf of the United Provinces, were distilled at the Jallo Factory. The Punjab resin yielded 18,734 maunds of rosin, or 71¾ per cent. by weight and 52,701 gallons of turpentine, or 2·02 gallons per maund of crude resin distilled. The average sale price obtained for rosin was Rs. 17-8-3 per maund and for turpentine, quality I, Rs. 4-13-10 per gallon, as compared with Rs. 16-3-4 and Rs. 3-14-7, respectively, during the preceding year.

Miscellaneous.

323. A re-organization scheme for the Subordinate Forest Service was sanctioned with effect from 12th June 1919, as a result of which the scale of pay for all the cadres, except Rangers, was raised and a certain number of new posts added to each of the cadres. The increase is, however, to be spread over four years.

324. In pursuance of the policy of reducing the size of the larger and more unwieldy Divisions the Government has sanctioned the division of Kangra by the formation of a new Hoshiarpur Division. The splitting up of the Bashahr Division into two territorial charges has

been under consideration for some years past, but it has now been decided to abandon the idea of territorial distribution and to constitute two collateral Divisions, one called a Forest Division for the sylvicultural work and the general administration of the forests and the other an Exploitation Division for all timber works from the felling of the trees to the delivery of the timber in depôt. The scheme presents obvious difficulties, but is to be tried as an experiment and the details are being worked out. A similar arrangement is proposed for Kulu when departmental work is started there.

Timber works.

325. The departmental timber works were carried on under adverse conditions. The influenza epidemic in the autumn of 1918 completely dislocated all work for a couple of months or more. In Rawalpindi lack of pack transport seriously hampered operations. In Bashahr, owing to the failure of monsoon in 1918, the supply of water in the floating streams was so low that the greater part of the timber cut failed to reach the depôt within the year. The greatest difficulty of all, however,—and this applies to all divisions—was the scarcity of labour, particularly of sawyers. The demand is much greater than the supply, and the real remedy is probably to be found in the replacement of manual by mechanical labour. Hitherto, apart from the initial difficulty of transporting machinery in a mountainous country devoid of cart roads, the principal objection to the use of saw mills in the higher hill forests has been that, with *deodar* and to a small extent blue-pine as the only saleable woods, it was difficult to get a sufficient quantity of timber within a conveniently limited area to feed a saw mill without having to shift the mill constantly from place to place at prohibitive expense. Now that blue-pine is readily saleable, and the vast areas of spruce and fir forest are to be regularly worked it should be possible to find sites where saw mills can be established on a semi-permanent basis, and fed for a whole season or more with timber brought down to them by slides and ropeways from the forests above. Ropeways have been indented for, but could not be obtained this year owing to the war; while enquiries are being made for a suitable type of saw mill.

326. With reference to the working of the fir (spruce and silver fir) forests mentioned above, the Forest Department has arranged to supply to the North-Western Railway a number of fir and *chil* sleepers, principally the former, estimated to amount to 390,000 by the end of March 1922 from Bashahr and Kulu. The Railway intends to erect a creosoting plant at Beas, and to treat these sleepers for use on the line. If the results are satisfactory, it is anticipated that large numbers of such sleepers will be used in future. This arrangement is advantageous to the Forest Department in that it will ensure a market for fir timber for the next three years, and will enable the Department to utilize a part at least of the large stock of over-mature trees now standing in the forests, though, on the other hand, the rates the Railway is prepared to pay will yield little financial profit. If a market for fir timber could be established in the Punjab large quantities would certainly be absorbed, and there appear to be possibilities of a trade with Calcutta and Bombay, where imported 'pine' wood, much of which is almost identical with Himalayan fir, is at present selling at very high prices.

Commercial industries.

327. The Indian oleo-resin industry for the production of rosin and turpentine can now be accepted as an established source of supply of these articles; it is now in a position not only to meet the Indian demand, but to build up, with every prospect of success, a sound export business. A second Ropar's unit has been ordered for the Jallo factory, while the United Provinces Forest Department is just completing a 3-unit factory at Bareilly. These two factories will be able to handle some 180,000 maunds of crude resin annually, the gross value of the resulting products being about Rs. 32 lakhs, of which the Punjab share would be Rs. 13 lakhs.

328. The utilization of waste wood and felling refuse offers a favourable field for investigation. There already exists in the Simla Hills a village industry for the extraction of *deodar* wood oil by distillation of the wood

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in primitive clay kilns. An experiment made on the same lines with *chil* felling refuse yielded 16 per cent. by weight of distillate containing turpentine, rosin, and rosin oil, tars and pitch. Such a distillate, treated at a central refinery, should yield valuable commercial products. The quantity of the yield in the above experiment was striking, since the destructive distillation of wood in retorts or masonry ovens does not yield results approaching these; in fact it is only the so-called "chilka" wood, rich in resin, which can be thus treated to any purpose. The development of this embryo industry must, however, await the appointment of a special Utilization Officer in the Punjab; and the same may be said of the match industry, and of the utilization of the various hard woods, such as maple and elm, which grow in large quantities in the hill forests. The woodpulp industry, which has been under consideration off and on for some years past, can be relegated to the background if the market for fir sleepers and timber develops as anticipated.

War supplies.

329. During the year the Munitions Board obtained from the province 442,500 cubic feet of timber exclusive of railway sleepers, for military purposes, as against 3,350,000 cubic feet last year. Most of the timber came from contractors and from the Kashmir State. In addition the Forest Department supplied 25,000 *chir* ballis, 4½ tons of rosin, and 16,545 gallons of turpentine. These figures represent practically only half a year's supplies, as buying was stopped in December owing to the signing of the armistice, when all indents were cancelled; and buying was not resumed until May. A complete report of the activities of the Forest Department in the supply of war material during the past few years has been separately compiled.

Financial results.

330. The financial results are given in section 43; the year's working shows a surplus of Rs. 19,67,660 and a cash surplus of Rs. 5,68,472. The prices of all kinds of timber and firewood continued to be high and the market for resin products was also most favourable.

ARBORICULTURE.

331. The triennial report is due next year.

31.—Mines and Quarries.

Indian Mines Act.

332. The total number of coal collieries and other mines, coming under the Indian Mines Act, worked during the year under report was 22. Of these 4 are Government Salt Mines, 7 coal collieries (5 in Jhelum, 1 in Mianwali, and 1 in Shahpur), while the remainder are slate, lime and stone mines (3 in Gurgaon, 2 in Gurdaspur, 5 in Kangra, and 1 in Hoshiarpur).

333. The total amount of mineral raised and its value, as compared with 1915, 1916 and 1917, is as follows:—

	Mineral in tons.				Value in Rupees.			
	1915.	1916.	1917.	1918.	1915.	1916.	1917.	1918.
Coal ...	59,579	47,448	49,868	48,587	3,24,533	3,20,026	3,76,192	5,70,201
Salt ...	154,770	160,356	152,360	158,512	3,94,986	4,09,244	3,88,809	4,04,539
Slate, Stone, Lime.	7,910	3,715	8,860	8,482	1,09,926	1,07,890	1,07,913	1,31,370
Potash ...	...	...	181	134	...	...	928	687

Except in the case of salt, there was a slight decrease in the outturns as compared with 1917. This decrease was in the main due to labour difficulties on account of recruitment, and the influenza epidemic. Selling rates of coal ruled high during the first half of the year, but in the second half prices were fixed by the Deputy Coal Controller. The trade seems to have suffered considerably during the first part of the year owing to the shortage of waggons.

334. Save for the influenza epidemic, the health of the operatives has generally been good and sanitation sufficient.

335. Minerals, which do not come under the Indian Mines Act, are—Gold (by washing), Petroleum, Alum-shale, Block-kankar, Limestone, Gypsum, Antimony-ore, Building and Sand Stone. The outturn and value of these minerals during the year were as follows :— Other Minerals.

District.	Name of Mineral.	Outturn.	Value.
			Rs.
Ambala, Attock and Jhelum	Gold by washing	109·95 ozs.	8,119
Attock	Petroleum	750,000 gallons.	75,000
Mianwali	Do.	807 „	129
Do.	Alum-shale	1,029 tons.	1,400
Ambala	Block-kankar	631 „	706
Jhelum	Limestone	38,415 „	27,103
Do.	Gypsum	1,871 „	1,403
Do.	Antimony-ore	1·4 lbs.	20
Do.	Sand-stone	27,613 tons.	23,441
Simla	Building stone	10,284 „	2,402-8-0

336. The Attock Oil Company and another company are continuing their borings for mineral oil. The former Company struck oil over 3 years ago, but progress has been greatly hindered by the difficulty of getting men and material during the war. It is understood, however, that the company proposes to erect very shortly a refinery for its oil at Rawalpindi.

32.—Manufactures.

337. During the year 1918 the permanent Factory Inspector was on Military Duty, so that the responsibility for the inspection of factories devolved upon Deputy Commissioners. The number of factories registered under the Act again rose from 191 to 203, this increase being chiefly due to the opening of new cotton ginning factories in the districts of Multan, Montgomery, Lyallpur and Amritsar. It is noteworthy that towards the end of the year the Shahdara (Lahore) Cotton Mill, one of the few Spinning Mills in the Punjab, closed down owing to the People's Bank liquidation; its machinery and equipment are being transferred to Bombay. Of 203 registered factories only 176 factories worked during the year. General.

338. The question of making factory inspections by the District Magistrate and his assistants the rule instead of the exception, the prevention of various abuses in factory management brought to light in various districts, and the necessity for making more stringent rules, particularly in connection with the employment of women and children, are under the consideration of Government, but a final decision will not be reached until the return of the Inspector. Similarly the new factory rules published with Punjab Government Notification No. 21433, dated 19th November 1917, are awaiting confirmation.

Sanitation.

339. As many of the new factories in the canal colonies are not built in accordance with the rules relating to ventilation and lighting, plans have now to be submitted to the Inspector of Factories before being finally approved.

340. Water supply, lighting and general sanitary conditions were on the whole satisfactory, although the annual lime-washing was neglected in the majority of seasonal factories. Ventilation in these factories as a rule leaves much to be desired. The general rise in the wages of unskilled labour was maintained throughout the year.

Accidents.

341. There was a considerable decrease in the number of reported accidents this year as will appear from the following comparative statement of accidents for the last 3 years :—

1916.	*1917.*	*1918.*
190	211	158

It is, however, a matter for regret that the number of fatal accidents—16—is the largest yet reported in any one year, and it is doubtful whether the reported decrease in the number of accidents of all kinds is really in accordance with facts, seeing that the number of operatives has reached the record figure of 39,000.

33.—Trade.

Rail and River Borne Trade.

Harvests.

342. The statistics included in this report, which deals with the triennium ending 1918-19, relate to the spring and autumn harvests of 1916, 1917 and 1918. Sowings were nearly normal in the spring harvests of 1916 and 1917; but owing to the failure of the winter rains the outturn was much below normal in the former and barely up to normal in the latter. In the spring harvest of 1918 weather conditions were, as a rule, favourable at the time of sowing and remained so till the close of the harvest, and the outturn was considerably above normal. The kharif of 1916 was not a bad harvest on the whole, though the yield of jowar was much reduced by excessive rains, and that of cotton also was slightly below normal. The kharif of 1917 was seriously damaged by abnormally heavy rainfall, rice and sugarcane being the only crops that did well. The kharif of 1918, on the other hand, suffered considerably from drought; but the total yield of sugarcane, cotton and rice, which are generally grown on irrigated lands, was rather above normal.

Prices.

343. Prices as a rule were higher in the triennium under review than in the preceding triennium. Much of the increase was due to conditions brought about by the war, though a decrease in production was not one of these. The other general causes of increase of prices, however, namely, increased consumption of articles required in connection with the war, rise in wages, shortage of freight, and expansion of currency and credit have all to a greater or less extent affected this province.

General results.

344. The following table gives the totals of trade exclusive of animals and treasure during the last two triennia :—

		Exports.		Imports.	
		Maunds.	Value.	Maunds.	Value.
			Rs.		Rs.
1913—16	Total	162,885,474	92,97,84,594	189,075,904	96,45,04,993
	Average	54,295,158	30,99,28,198	63,025,301	32,15,01,664
1916—19	Total	177,098,356	1,24,78,21,786	183,905,195	1,23,38,84,506
	Average	59,032,785	41,59,40,595	61,301,732	41,12,94,835

345. As compared with the preceding triennium imports decreased by nearly 3 per cent. in volume, or by nearly 12 per cent. if the articles imported for railway purposes, namely, coal and coke, carriage and trucks, locomotive engines, sleepers and other railway materials be left out of account. The value of imports, however, rose by nearly 28 per cent. Both the decrease in volume and the increase in value were due to the same cause, namely, the rise in prices. Exports increased by 9 per cent. in volume and by 34 per cent. in value. The statistics of trade thus indicate that the prosperity of the province remains unimpaired in spite of the disturbing effects of the war. Taking the triennium under review as a whole the balance of trade was favourable to the Punjab, the total value of exports exceeding the total value of imports by nearly Rs. 1¼ crores.

Exports of grain.

346. The Punjab continues to be essentially an agricultural province and the only manufactured articles exported in any appreciable quantity are Indian woollen piece-goods. The province is not, however, self-sufficing as regards some of the agricultural products. In the triennium under review, for instance, imports of cotton seed, sugar, til, tobacco and rice exceeded exports. It is, however, satisfactory to note that fodder which on the balance was imported in the preceding triennium was exported in the period under review. Grain and pulses constituted 69 per cent. of the total exports as regards volume and 46 per cent. as regards value.

347. As compared with the preceding triennium the net exports of wheat and wheat flour decreased by 48½ lakhs of maunds in quantity and Rs. 81½ lakhs in value. The large decrease was due partly to the fact that the total outturn of wheat was 11 per cent. less than in the preceding triennium and partly to the restrictions imposed on exports. Of the total quantity of wheat and wheat flour exported from the Punjab and the North-West Frontier Province 74 per cent. was despatched to Karachi. Exports to the United Provinces show a considerable falling off as compared with the preceding triennium in which heavy consignments were sent to those provinces owing to the prevalence of famine in 1913-14. The net exports of gram and pulses increased by 37¼ lakhs of maunds in quantity and Rs. 373¼ lakhs in value. The total outturn of gram in *Rabi* 1918 was 90 per cent. above normal and the exports of gram made in 1918-19 were probably the heaviest on record. Owing to the favourable harvests in 1916 and to a lesser extent in 1917 exports of jowar and bajra exceptionally exceeded imports in 1917-18 and 1918-19. The outturn of rice was also much above normal during the period under review, but on the aggregate the imports of rice exceeded the exports despite a steady decrease in the former and a steady increase in the latter.

Other exports.

348. The total outturn of cotton decreased by 17 per cent., as compared with the preceding triennium. The net exports, however, increased by 2¼ lakhs of maunds in total quantity and Rs. 744 lakhs in total value. The market for raw cotton was at first seriously affected by the war, but a large demand subsequently sprang up owing to greater mill consumption in India and heavier exports to Japan and the United Kingdom. Thanks to the good outturn of cotton in *Kharif* 1918 the total exports of the year 1918-19 were nearly double those of the preceding year and above those of any other year subsequent to 1913-14. The exports of oil-seeds which had declined in the preceding triennium owing to the stoppage of trade with Germany, the largest customer before the war, showed a substantial recovery in the triennium under review, the total exports exceeding those of the preceding triennium by 3½ lakhs of maunds in quantity and by Rs. 87½ lakhs in value. The exports of wool (raw) increased by nearly 40 per cent. in quantity and by nearly 152 per cent. in value. The net exports of Indian woollen goods have, however, decreased by ten hundred maunds in total quantity and Rs. 5½ lakhs in total value. Much of the demand for these goods, it would appear, ceased with the war. The statistics of the triennium under review which exhibit an increase of 20½ lakhs of maunds in the total quantity and of Rs. 119 lakhs

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in the total value of the net exports of salt, afford a further proof of the growing popularity of the Khewra salt in other provinces, though allowance must be made for the reduction of supplies from Europe. The net exports of saltpetre, the demand for which was sharpened by the war show an excess of $4\frac{1}{4}$ lakhs of maunds in quantity and Rs. $69\frac{3}{4}$ lakhs in value. Hides advanced by $2\frac{1}{4}$ lakhs of maunds in quantity and Rs. $223\frac{1}{4}$ lakhs in value, while leather rose as much as 16 thousands of maunds in quantity and Rs. $13\frac{3}{4}$ lakhs in value. An improvement of $2\frac{3}{4}$ lakhs of maunds in the quantity and of Rs. 64 lakhs in the value of the net exports of liquors from the Punjab affords some indication of the extent to which Punjab breweries are benefiting by the restrictions on the import of beer and ale from other countries.

Imports.

349. The net imports of coal and coke for railway purposes which largely increased during the preceding triennium show a further increase of $113\frac{3}{4}$ lakhs of maunds in weight and Rs. $115\frac{1}{4}$ lakhs in value during the period under review. On the other hand, owing to the shortage of rolling stock and the rise of prices the net imports of coal and coke for other purposes which had fallen by 19 lakhs of maunds in the preceding triennium were further reduced by $9\frac{3}{4}$ lakhs of maunds. The net imports of cotton piece-goods of foreign manufacture declined by two lakhs of maunds in weight and Rs. $189\frac{1}{2}$ lakhs in value. On the outbreak of war there was a sudden drop in the trade in these goods. During the first three of the four subsequent years, imports were above those of 1914-15, though considerably lower than those of the pre-war period but during the last year they fell to a point below that of 1914-15. The improvement that had occurred in the preceding triennium in the trade in piece-goods of Indian manufacture was not maintained in the triennium under review. During this period, the net imports of such goods decreased by three lakhs of maunds in weight, though there was an increase of Rs. $338\frac{1}{2}$ lakhs in value. Owing to the fact that the total outturn of bajra was much above normal in *Kharif* 1916 and only slightly below that standard in *Kharif* 1917 the net import of jowar and bajra decreased by $19\frac{3}{4}$ lakhs of maunds and $91\frac{1}{2}$ lakhs of rupees. As ample supplies of fodder were available the net imports of cotton seed which is chiefly consumed in the cis-Sutlej territory fell by 31 lakhs of maunds in weight and Rs. 13 lakhs in value. The outturn of sugar was considerably above normal throughout the period under review and imports of that commodity dropped $13\frac{1}{2}$ lakhs of maunds in weight, though the value rose to the extent of Rs. $333\frac{3}{4}$ lakhs. A decrease of $4\frac{1}{2}$ lakhs of maunds in weight and Rs. $62\frac{1}{2}$ lakhs in the value of the net imports of rice is due to a similar cause. Heavy exports of food-grains were responsible for an increase of $1\frac{1}{2}$ lakhs of maunds in the weight and Rs. 189 lakhs in the value of the net imports of gunny bags. Other important articles of merchandise which have been imported in larger quantities in the triennium under review are apparel, chemicals, castor oil, dried fruits and nuts, tobacco, spices and tea, the increase in the imports of some of these articles being obviously due to the improved standard of living. Important decreases have occurred under metals, mineral substances and medicinal preparations, dyes, kerosine oil, paper and pasteboard, carriage and trucks, locomotive engines and silk, owing to the general rise in prices and shortage of freight. In the case of metals, mineral substances and medicinal preparations, however, there was some recovery in 1918-19.

River-borne trade.

350. In 1918-19 imports by the river Indus amounted to 0·4 per cent. of the total imports as regards volume and 0·8 per cent. as regards value. Similar percentages in regard to exports by the river are, respectively, 4 and 3. The principal articles of import are piece-goods, rice, gunny bags, bars, sheets and girders, kerosine oil, sugar and tobacco and the principal articles of export, cotton (raw), hay, straw and grass, grain, rape and mustard and wood. As compared with the preceding triennium the import trade increased by one lakh maunds in volume and Rs. $4\frac{1}{2}$ lakhs in value, and the export trade by $6\frac{1}{2}$ lakhs of maunds in volume

and Rs. 66½ lakhs in value. No doubt the restrictions in respect of Railway facilities are in some measure the cause of the rise.

Treasure.

351. Owing to the stoppage of the issue of sovereigns and the increased demand for gold in other countries the net imports of gold coin and gold bullion amounted only to Rs. 188 lakhs in the triennium under review as against Rs. 818 lakhs in the preceding triennium. The net imports of silver bullion also decreased from Rs. 408 lakhs to Rs. 84 lakhs. The net imports of silver coin on the other hand increased from Rs. 393 lakhs to Rs. 1,894 lakhs. A comparatively large amount of this coin was required owing to the deficient supply of gold coin. The net imports of treasure in the triennium under review amounted to Rs. 2,169 lakhs against Rs. 1,617 lakhs in the preceding triennium, the increase being chiefly due to large purchases made in the province for war purposes.

Distribution of trade.

352. Karachi continues to be the best customer, though its supremacy is now not so marked owing to the special conditions of the period. Its share of the total exports amounted to 47 per cent. as regards value in the first year of the triennium to 49 per cent. in the second and to 27 per cent. in the third. Almost the whole of the wheat exported is booked to Karachi and in a normal year, much of the cotton is despatched to this port. In the last year of the triennium, only a comparatively small amount of wheat was sent owing to the restrictions on export, while an unusually large proportion of the cotton was exported to Bombay. The United Provinces now occupy only the third place among the customers of the province. Owing to decreased exports of wheat, wheat flour and salt the percentage taken by these provinces in the last year of the triennium under review amounted to 16 per cent. as against 21 per cent. in the last year of the preceding triennium. The other principal customers are (1) Bombay Presidency, (2) Sind and British Baluchistan, (3) Rajputana and Central India and (4) Calcutta, the shares of which in 1918-19 amounted, respectively, to 8, 6, 6 and 6 per cent. In the last year of the period under review 23 per cent. of the imports were received from the United Provinces, 18 per cent. from Calcutta, 17 per cent. from Bombay, 14 per cent. from Karachi, 6 per cent from Bihar and Orissa and 22 per cent. from the remaining sources of supply. As regards the distribution of the trade among the internal blocks, it appears that the Cis-Sutlej territory (excluding Delhi) and the territory between the Jhelum and the Sutlej take nearly 70 per cent. of the imports and supply nearly 86 per cent. of the exports, and that among the other blocks, the first in the order of importance is the Delhi City, the second, the territory between the Jhelum and the Indus and the third, the trans-Indus territory.

Trans-Frontier Trade.

353. During the triennium ending with the year 1918-19 the figures of imports amount to Rs. 58,09,923 as against Rs. 43,84,511 for the preceding triennium and similarly those of exports to Rs. 88,13,486, as compared with Rs. 49,69,174. These figures indicate that trade—both import and export—is steadily expanding, and that the balance of trade is becoming increasingly favourable to the Punjab. The net imports of treasure during the triennium under report amounted to Rs. 26,69,288, or Rs. 3,34,275 less than the excess of the total value of exports over that of imports.

Trade with Afghanistan.

354. The principal articles imported are non-intoxicating drugs, fruits, hides and skins, ghi and wool, all of which, except fruits, show a decrease as compared with the previous triennium. The variations are ascribed to the diversion of some of the trade to the Quetta Railway, the restriction of export from Afghanistan, and to the competition of local production in the case of certain articles.

PRODUCTION AND DISTRIBUTION.

355. The principal articles of export are—Piece-goods (Indian and European), earthenware, rice (husked), leather (unmanufactured and manufactured), iron, sugar (unrefined) and Indian tea (green).

356. The most remarkable features of the export trade during the past six years were (1) that there was no export of European piece-goods during the years 1915-16 and 1916-17; (2) that in both these years there was a larger export of Indian piece-goods than usual; (3) that a large increase occurred in the export of all articles, especially of piece-goods—both Indian and European—in 1917-18; (4) that no green tea has been exported since 1915-16; (5) that in 1917-18 a demand for black tea has sprung up The decrease in the volume of export in 1918-19 was clearly due to the Marri disturbances which occurred in the spring of that year. The rise in the export of Indian piece-goods at the expense of the European article in 1915-16 and 1916-17 was due to the fact that the prices of the former goods did not respond so quickly as the latter to the war conditions. The supply of tea was probably diverted to the Quetta Railway, the trade of which is not registered in the Punjab. The increase in the volume of exports in 1917-18 is accounted for by the special war conditions which prevented goods being brought from Eastern Europe to Afghanistan, Khurasan and Persia. No movements of treasure have been registered, though the balance of trade during the last triennium has been favourable to the Punjab.

Trade with Central Asia.

357. The chief commodities of imports are—Ponies, sheep and goats, charas, salt, silk (raw) and wool (raw). Goats and sheep are used as carriers for the transport of Tibetan salt, and variations in their imports depend mainly on the demand for this salt. The decrease in the import of charas was due to the fact that there was a heavy rush in the year preceding the triennium under report in order to anticipate the increase of duty which came into force on 1st April 1916, considerable stocks being thus accumulated in the Punjab markets. The larger quantities of Tibetan salt are accounted for by the dearness of the home article. The variation under raw silk—a decrease in weight accompanied by an increase in value—was probably caused by the shortage of supplies from China. The rise in the import of raw wool may be ascribed to war requirements.

358. In the case of exports there has been an increase in the last triennium in all the important articles except skins of sheep, paints, provisions and wool (manufactured). The increase in the export of coral appears to have been due to the return of the trade to its normal proportions. The dislocation of the Russian trade owing to the war and the consequent absence of Russian competition were responsible for the increase in the export of (1) piece-goods, (2) twist and yarn, (3) indigo, (4) other dyes, (5) silk, manufactured, and (6) sugar. The rise in the export of intoxicating drugs is the result of a comparatively large consumption of this article in Turkistan during the prevalence of plague in 1916-17. Leather (unmanufactured) is said to be becoming increasingly popular in Turkistan. The same statement has been made in regard to tea, as regards which, it is also necessary to explain that it was not correctly classified in trade returns prior to November 1916. The falling off under skins of sheep, etc., is ascribed to the partial replacement of Indian skins by skins coming from China proper. Under paints and colours there was a decrease in weight accompanied by an increase in value owing to the scarcity of this article in India. A similar variation occurred in the case of wool (manufactured) owing to a comparatively large demand for this article in India in connection with the war. The conditions brought about by the war were also reponsible for a decrease in the export of other provisions and all other articles of merchandise. The aggregate value of the net import of treasure, including paper money during the last triennium, was Rs. 49,85,673. There were large imports of Russian paper in 1917-18 and 1918-19, the value being Rs. 13,60,961 in the former and Rs. 5,68,922 int he latter year. These imports were

mostly due to the fact that owing to a considerable difference between the Indian and the Russian rate of exchange large profits could be made from transactions in this paper.

Trade with Tibet.

359. The principal articles of import are—Sheep and goats, borax, skins of sheep, salt and wool (raw). As in the case of Central Asia goats and sheep are used as carriers and tend to increase with any improvement in the import of salt and other commodities. The import of borax has been steadily developing owing to the demand for this article in connection with the war. The larger import of Tibetan salt is accounted for by the smaller supplies of the Indian article. The import of wool advanced to some extent in the last triennium as compared with the preceding triennium, but each of the last two years showed a decline. In 1918-19 this decline appears to have been due to the scarcity of transport and to a diminished supply owing to the deficiency of flocks. The demand for wool has strengthened in consequence of the war, but the supply has not kept pace with the demand.

360. The main staples of export are—Coral, piece-goods (Indian), other spring crops, rice (husked), brass and copper, tea, green and black (Indian), wool, manufactured, and silver. The reason for the increase in the export of coral is not apparent. The decrease in wheat export is due at least partly to the fact that the returns for the previous triennium included much wheat exported from below Sultanpur to Upper Kulu and Lahoul which never reached Tibet. Much of the apparent improvement under other foodstuffs is also fictitious, being due to the transfer of the trade post from Sultanpur to Kyelong. The falling off under rice is the result of a shortage of supplies, while that under brass and copper may be ascribed to the large rise in the price of these articles owing to the war. Wool (manufactured) is neither an important nor a regular item of export. The increase in the value of silver exported to Tibet is said to be accounted for by the fact that before the transfer of the Sultanpur trade post, exports of silver coin were seldom recorded. Exports of tea—both green and black—have considerably increased in the triennium under report as compared with the preceding triennium. Large quantities of both kinds of tea were exported in the first year of the triennium under report, but the demand was not maintained in the subsequent two years; in fact there was no export of black tea in 1918-19. There is, however, plenty of room for the expansion of the tea trade.

Joint Stock Companies.

361. The number of Companies limited by shares has declined by 7 to 76, eight Companies having gone into liquidation, while one was transferred from the North-West Frontier Province. Of the two Companies mentioned last year as moribund, one has been finally dissolved. Three Companies are doing no business and will probably go into liquidation shortly. There are 28 Companies limited by guarantee.

362. Owing to the continued liquidations the authorised capital of public Companies declined by Rs. 21·6 lakhs. On the other hand, subscribed and paid up capital increased by over Rs. 47 lakhs. Three European-managed concerns chiefly account for this increase. The capital of Indian-controlled Companies continues to decline.

34.—Buildings and Roads.

Total Expenditure.

363. The total outlay on public works in the Buildings and Roads Branch during the year amounted to Rs. 78·13 lakhs, an increase of slightly over Rs. 20 lakhs, as compared with last year. Imperial Military and Imperial Civil Works accounted for about two lakhs of this, while Contribution Works were responsible for a further 3 lakhs, the expenditure on Provincial Civil Works being approximately 15 lakhs above the figure of 1917-18.

PRODUCTION AND DISTRIBUTION.

Imperial Military Works.

364. On the cessation of hostilities the work on the temporary lines at Ludhiana and Montgomery was stopped and the accounts settled up. A bridge over the Haro river consisting of 10 spans of 42 feet was constructed in about three months as an urgent military necessity.

Imperial Civil Works.

365. The special repairs to Viceregal Lodge, necessitated by the decay of the stone, were continued, while in addition work was commenced on the preparation of the site and realignment of certain roads in connection with the new Telegraph and Telephone Office at Simla designed by the Consulting Architect to the Government of India.

Provincial Civil Works.

366. No important land revenue buildings were constructed during the year. Land was acquired at Charing Cross in connection with the new Civil Secretariat to be built there. The development of the Brockhurst Estate at Simla was commenced with the construction of three large houses which were well advanced towards the end of the year. Quarters for minors under the Court of Wards were built at the Punjab Agricultural College, while the experimental farm buildings at this college were also extended. The erection of a normal school and boarding house at Ghakkar in the Gujranwala District at an estimated cost of Rs. 1·15 lakhs was commenced, while arrangements were in hand for the building of a similar school at Lala Musa. Progress on the construction of the Police Lines at Amritsar was not satisfactory owing to the delay which occurred in securing possession of a part of the site. Police Stations at Thanesar and Nuh were practically finished. The year saw the completion of the Chemical Examiner's Laboratory at Murree while a similar building at Lahore was well in progress. The commencement of work on the laboratory for the Chief Malaria Medical Officer was delayed owing to certain difficulties about the site. A number of rest-houses were under construction in the Attock, Mianwali and Shahpur Districts, while heavy expenditure had to be incurred in a thorough overhaul and repair of the buildings at Fort Munro, which had been damaged by the abnormally heavy monsoon of 1917, and subsequently by the Marri raiders in the spring of 1918.

Communications.

367. Good progress was made on the Fatehjand-Khaur Road, which is to open out the Attock Oil Fields, thanks to the assistance rendered by the Military Authorities in lending two Military Camel Corps for transport purposes. Work on the Larji-Mandi Road which had been interrupted by the war was resumed and the long delayed completion of the first section was in sight towards the end of the year. Work on the second section of this road was commenced on the difficult portion through the Bhabbas cliffs, which it was decided to complete before commencing operations on the more easy lengths. The improvement, involving remetalling, realigning and raising at various places, of that portion of the Multan-Loralai Road, which lies within this province, was seriously taken in hand and satisfactory progress was made.

368. The necessity for the provision of through communication by road for military purposes and the fact that the North-Western Railway were preparing to remodel their bridge over the Chenab river by training the river through a small number of spans, precipitated the construction of a road bridge over the Chenab. Work during the year under review was, however, confined to preliminary measures, such as the burning of bricks, the earth-work on the approaches, the construction of temporary buildings and the collection of plant. Work was also started late in the year on the erection of bridges over the Tangri and Omlah Nullahs on the Grand Trunk Road near Ambala, the completion of which will remove a great obstacle to road traffic during the monsoon.

Miscellaneous Public Improvements.

369. The needle weir to impound the waters of the Chota Ravi as an ornamental lake for Lahore was completed, and considerable progress was made on the roads in the Ravi Park. Footpaths and

tan rides were also extended along certain important roads in Lahore. The construction of markets and the sinking of wells in the towns of Khanewal and Mian Channu in the Lower Bari Doab Colony was taken in hand.

Contribution Works.

370. The King Edward Memorial group of college and hospital buildings was finished. Certain extensions to the Lyallpur Water Works were completed at a cost of about Rs. one lakh, while certain protective works were carried out at Markanda and Ghazipur in the Ambala District.

Famine, Floods, Earthquake.

371. The necessity for famine relief works did not arise during the year, nor was any damage to Government property caused by earthquake and floods. There was, however, a heavy wind storm at Montgomery which blew down about 100 feet of the jail enclosure wall, and also caused considerable damage to the Temporary Lines under construction.

Sanitation.

372. The extensions of the Lyallpur Water Supply have already been mentioned. The extensions to the Dera Ghazi Khan Water Supply have been completed, but trouble is being experienced owing the deposit of calcium carbonate on the strainer wires of the tube wells. An experimental tube well was being sunk in the Empress Gardens at Jullundur, and drainage schemes were either in hand, or completed, during the year, at Rupar, Kalka, Wazirabad, Eminabad, Lala Musa, Bhera and Gurdaspur.

373. The Sanitary Sub-Division formed last year to secure specialised control over sanitary works in connection with Provincial properties in Lahore has done excellent work, and enabled the Sanitary Engineer to keep a much closer control over these undertakings.

Consulting Architect.

374. The value of the work designed in the Consulting Architect's office continues to increase. The Charing Cross Scheme advanced one stage further with the completion of the Masonic Hall and the laying out of roads, paths and grass. In connection with the King Edward Memorial the Chaubara of Chhajju Bhaggat was partially repaired and now presents a picturesque appearance. Six houses have been built and three more designed and commenced in connection with the Gazetted Officers' Residences Building Scheme, Lahore. Two pairs of entrance gates were fixed at Government House, Lahore.

375. The alterations carried out to the surroundings of the Punjab University have been completed, and considering the difficulties presented by the varying angles at which the existing buildings stand, the work satisfactorily realises the object in view. Three houses, already mentioned in connection with the Brockhurst Estate, Simla, were designed by the Consulting Architect, who has also under consideration designs for a set of flats to be built on the site of Brockhurst House and also plans for other houses for officers and quarters for clerks on this estate. Preliminary designs and models were also prepared for the conversion of the Chief Court into a High Court, while other works, which may be mentioned, are the Punjab Light Horse Headquarters, and certain schools in various parts of the province.

Electrical Engineer.

376. The Electrical Engineer continued to act as Electrical Engineer to the North-Western Railway, and as Electrical Adviser to the Bahawalpur and Jind Darbars, in addition to his own duties. He also undertook the duties of Electrical Adviser to the Government of India for six weeks. No new Electrical projects were prepared during the year under review, but a preliminary application for a license for the supply of electricity in the Cantonment and Municipal Area of Rawalpindi was received, and was under the consideration of the Military authorities.

Establishment.

377. Subsequent to the cessation of hostilities a certain number of officers were returned to Civil employ, but many more were either granted leave on demobilisation, or continued in Military employ to the end of the year under review. Owing to the increased amount of work carried through and the still depleted state of the cadre the establishment charges dropped to the low figure of 14·4 per cent. of the works outlay.

PRODUCTION AND DISTRIBUTION.

34-A.—Railways.

378. No new lines were opened and the booking of goods had still to be restricted in order to give preference to essential military and export traffic.

35.—Irrigation.

General.

379. The direct receipts and expenditure during the year amounted to Rs. 2,86,35,084 and Rs. 1,27,83,394, respectively, as compared with Rs. 2,72,66,487 and Rs. 1,53,64,828, the average of the triennium ending 1917-18. The expenditure, as divided between capital and working expenses, was Rs. 11,61,878 and Rs. 1,16,21,516, respectively, the former sum being the net expenditure after deducting an amount of about Rs. two lakhs, which was realized from the sale of surplus stores and tools and plant and recovered from the cultivators on account of cost of water-courses.

380. The indirect revenue, credited to the canals on account of enhanced land revenue, amounted to Rs. 1,45,55,293 as against Rs. 1,21,59,256 the average of the previous triennium.

381. The total area irrigated by works of all kinds under the control of the Irrigation Department was 9,015,984 acres showing a decrease of 47,917 acres and 209,298 acres, as compared with the previous year and the average of the previous triennial period.

382. The capital outlay (direct and indirect) incurred on canals classed as Productive Major Irrigation Works amounted to Rs. 12,06,387 bringing the total capital cost of those works to about Rs. 2,400 lakhs, including Rs. 155 lakhs contributed by Native States. The net revenue earned by Imperial canals was Rs. 3,03,00,511, yielding a profit of Rs. 13·50 per cent. on the capital invested to date (Rs. 22,45,11,551).

383. The area irrigated by, and the financial results of, the operations of canals classified as Productive Major Works are shown in the following statement :—

1	2	3	4	5	6	7	
Serial No.	Name of Canal.	Area Irrigated.	Gross Income.	Working Expenses.	Net Income.	Percentage profit on the Capital outlay:	
						Excluding interest charges.	Including interest charges.
		Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Western Jumna ...	720,532	(a) 28,75,154	(a) 13,41,447	(a) 15,33,707	(a) 8·66	(a) 5·33
2	Sirhind ...	1,425,401	(b) 28,67,716	(b) 11,81,868	(b) 16,85,848	(b) 6·56	(b) 3·24
3	Upper Bari Doab ...	1,065,049	51,06,423	13,22,309	37,84,114	16·89	13·57
4	Lower Bari Doab ...	678,004	46,93,839	11,71,904	35,21,935	15·55	12·15
5	Upper Chenab ...	426,864	19,87,335	12,80,996	7,06,339	1·97	—1 41
6	Lower Chenab ...	2,339,198	1,66,24,247	23,74,976	1,42,49,271	43·85	40·44
7	Upper Jhelum ...	246,609	8,00,505	7,37,645	62,860	0·14	—3·27
8	Lower Jhelum ...	777,496	42,77,101	8,60,215	34,16,886	20·49	17·13
9	Upper Sutlej Inundation Canals.	258,499	8,40,909	3,76,397	4,64,512	25·63	22·33
10	Sidhnai Canals ...	229,397	8,11,923	95,788	7,16,135	53·82	50·43
11	Indus Canals ...	181,097	4,29,790	2,70,886	1,58,904	5·33	1·94
	Total ...	8,348,146	4,13,14,942	1,10,14,431	3,03,00,511	13·50	10·12

(a) Excludes Patiala State.
(b) Excludes Native States—Patiala, Nabha and Jind.

384. On all the Imperial Minor Works not classed as Productive, including the two canals for which a Capital Account is kept, the net profit amounted to Rs. 8,02,145, as compared with Rs. 12,36,137 in the previous year.

385. There is only one Provincial Canal in operation, *viz.*, the Shahpur Provincial Canal, the Ravi Inundation Canals having now ceased to exist. The net profit was Rs. 2,595.

386. The details of the working of each canal will be found below.

MAJOR WORKS—CANALS IN OPERATION.

Western Jumna Canal.

387. The canal was in flow for 329 days (167 days in *Kharif* and 162 days in *Rabi*) and was closed for 36 days (16 days in *Kharif* and 20 days in *Rabi*) during the year. The *Kharif* season started inauspiciously as the monsoon rains, with the exception of a few showers early in June, commenced only in the middle of August, lasted for a fortnight and failed entirely thereafter. Winter rains commenced at the end of January and continued during February and March, to the great benefit of the standing crops. The total area irrigated, including the area irrigated in the Patiala and Jind States, was 720,532 acres (349,172 acres in *Kharif* and 371,360 acres in *Rabi*), as compared with 792,955 acres (360,763 acres in *Kharif* and 432,192 in *Rabi*), the average of the previous triennium. The decrease in the area irrigated during *Kharif* was due to the early failure of the cotton crop owing to the ravages of grasshoppers, while the influenza epidemic during October and November and the earlier failure than usual of the supply in the river were responsible for the poor results in the *Rabi* season.

388. The gross receipts under *Imperial* were Rs. 28,75,154 and the working expenses Rs. 13,41,447, giving a net revenue of Rs. 15,33,707, as compared with Rs. 17,79,926, the average of the previous triennium and Rs. 19,43,112 in the previous year. The falling off was due to the decrease in the area irrigated during *Rabi* 1917-18 and *Kharif* 1918, the assessment on which was collected during the year.

389. The net revenue received by the Patiala State on their channels on the Sirsa Branch amounted to Rs. 197,075, or 16·98 per cent. on the capital cost invested, against an average of Rs. 1,62,968, or 14·04 per cent. for the triennium ending 1917-18 and Rs. 2,20,460, or 19 per cent. in the previous year.

390. The working of the Jind State Distributaries showed a profit of Rs. 83,959 against Rs. 1,36,391 in 1917-18. The area actually irrigated was 56,400 acres, as compared with 60,602 acres, the average of the three preceding years.

Sirhind Canal.

391. The Canal was closed for 12 days only in the *Kharif* season (10 days in the early months and 2 days after the rainfall of August) owing to lack of demand and was in flow throughout the *Rabi*. The *Kharif* season was remarkable for the almost complete failure of the monsoon, the rainfall being generally less than half the normal. After the rain in April, which was in excess of the average, practically no rain fell, except in the third week of August. In *Rabi* the winter rains were timely and slightly in excess of normal throughout most of the tracts served by the canal.

392. The area irrigated on British and Native States Branches was 1,425,401 acres; practically the same as in 1916-17, a total which has been exceeded only three times. It would be misleading to compare the figures of the year with those of 1917-18 as in that year the rainfall was more than double the normal, while the area irrigated was less than two-thirds of the average.

393. The net revenue earned by the British Branches amounted to Rs. 16,85,848, giving a return of Rs 6·56 per cent. on the capital invested. The corresponding figure for the previous year was

Rs. 21,80,527, or 8·51 per cent. The decrease was due to (*a*) the poor *Rabi* area in 1917-18, collections for which were made in 1918-19, and (*b*) an uncollected balance of Rs. 1,52,022 for which the Native States were responsible. The working expenses were Rs. 11,81,868 or Rs. 72,623 less than in the preceding year working out to Rs. 1·33 per area irrigated, against Rs. 2·27, the highest on record, in the preceding year.

394. On the Native States Branches, the net revenue was Rs. 12,00,540, or 8·38 per cent. on the capital invested as compared with Rs. 13,17,444, or 9·20 per cent. in 1917-18.

Upper Bari Doab Canal.

395. The area irrigated was 1,065,040 acres against 1,144,521 acres during the preceding year. The decrease was due chiefly to the failure of the monsoon, and to the river remaining very low throughout the year.

396. The net income amounted to Rs. 37,84,114 equivalent to 16·89 per cent. on the capital invested, compared with 16·52 per cent. of the previous year. Remission of occupier's rate amounted to Rs. 41,237 against Rs. 3,04,973 in 1917-18. Remissions were due largely to the damage caused by insects owing to insufficiency of rain.

397. The canal was closed from 31st January 1919 to 15th February, when all falls were unwatered and repaired where necessary. The year under report was unfavourable for agricultural operations on this canal, as real monsoon conditions did not set in until the middle of August and ended as early as the first week in September. The canal supply was below indent from 11th September to 25th March 1919.

Lower Bari Doab Canal.

398. The canal was in flow for 305 days (166 days during *Kharif* and 139 days in *Rabi*) as against 323 days in the previous year.

399. The demand for canal water was keen throughout the year, rainfall being scanty, especially during the *Kharif* and the first half of the *Rabi* season. In the winter the river supplies were low, but timely showers in January saved the situation, which would otherwise have been critical.

400. The area irrigated was 678,004 acres as against 871,308 acres anticipated in the Project forecast. In 1917-18 with a similar forecast the irrigation was 621,600 acres. As remarked in paragraph 370 of last year's report, the progress of canal irrigation is a year behind that of the Project Estimate, owing chiefly to the Upper Jhelum Canal having been opened a year later than had been anticipated and also to the backwardness of colonization.

401. The gross receipts amounted to Rs. 46,93,839, the working expenses to Rs. 11,71,904 and the net revenue to Rs. 35,21,933. The receipts were about 28 lakhs more than those of the preceding year, and the net revenue gave a return of 16·3 per cent. on the capital invested as against 5·3 per cent. in the previous year. This was due to (*a*) the development of irrigation, (*b*) an increase under miscellaneous receipts from water power, (*c*) an increase in the credit at 4 per cent. per annum on the amount realized from sales of waste land, (*d*) and also to the fact that the credit of Rs. 17,10,221 on account of the land revenue and malikana in the Montgomery District was allowed for the first time during the year and included arrears for six previous years.

402. The area of the crown waste lands allotted at the end of the year amounted to 934,063 acres out of the 1,016,972 acres of the culturable area commanded. Great assistance to the working of channels was afforded by the large increase in temporary allotments of land.

Upper Chenab Canal.

403. The area irrigated during the year under review was 426,864 acres, as compared with 382,935 acres in the previous year

and the Project Estimate of 648,367 acres. The *Rabi* figures (222,170 acres) showed an appreciable improvement over that of the previous years, but the *Kharif* area (204,694 acres) was disappointing. The poor results during *Kharif* were attributable partly to deficient rainfall and partly to the fact that the *Kharif* Full Supply Factor on which the capacities of the distributaries channels have been based, had been wrongly calculated in the Project Report for the class of crops grown. Delay in the construction of watercourse systems, pending final settlements of the complicated question of canal irrigation of well areas in certain zones, also militated against the development of irrigation.

404. The net revenue amounted to Rs. 7,06,339, or 1·97 per cent. on the capital outlay. As remarked in last year's report, this canal is, in great measure, a feeder channel for the Lower Bari Doab Canal, so that, as a commercial concern, it cannot be judged by its own financial results.

Lower Chenab Canal.

405. The canal was in flow for 171 days in *Kharif* and 175 days in *Rabi* and was closed at the head for 12 days in *Kharif* and 7 days in *Rabi*.

406. The *Kharif* season was a dry one and demand for water was very keen. The *Rabi* rainfall, though poor, was very beneficial to the standing crops.

407. The area of 2,339,198 acres irrigated during the year, of which 795,545 acres were irrigated during the *Kharif* season alone, was the largest ever recorded. The slight decrease in the *Rabi* figures, as compared with the similar figures of 1917-18 and with the average of the previous three such crops was attributable to the deficiency of rainfall and to the severe influenza epidemic during sowing time as well as to rotational closures having commenced during the critical period of wheat sowing.

408. The net revenue amounted to Rs. 1,42,49,271, or 43·85 per cent. on the capital outlay as against Rs. 1,28,02,664, or 39·37 per cent. in the previous year. This favourable result was mainly due to—

(*a*) the record area irrigated during *Kharif* 1918;

(*b*) the absence of any debit in connection with the cost of Civil Administration in the Lyallpur District. In 1917-18 a sum of Rs. 8,34,000 was deducted on this account; and

(*c*) a greater area of higher rated crop having been matured during the *Rabi* crop of 1917-18 and *Kharif* 1918.

409. The accumulated net profits after defraying interest charges, have increased from Rs. 13,88,42,183 to Rs. 15,19,86,744 against a capital outlay of Rs. 3,24,96,216 invested at end of the year.

Upper Jhelum Canal.

410. This was the third year of irrigation on this canal. The area irrigated (246,609 acres) showed an increase of 69,603 acres over the figures of the preceding year, but was still short by 98,391 acres of the Project Estimate. This deficiency was due to—

(*a*) an unavoidable delay of a year in the opening of the canal;

(*b*) the epidemic of influenza that impeded cultivation and the development of new irrigation; and

(*c*) recruiting activities which made a heavy call on the agricultural classes.

411. The gross income from all sources amounted to Rs. 8,00,505 and the working expenses to Rs. 7,37,645, resulting in a profit of Rs. 62,860, or 0·14 per cent. on the capital invested. Last year there was a slight loss, but the expenditure incurred on this canal is largely in the interests of the Upper Chenab and the Lower Bari Doab Canals.

PRODUCTION AND DISTRIBUTION.

412. The gradual raising of the supply in the main line was carried on successfully during the year and all ordinary demands for water supply can now be met.

413. The Mangla Division was amalgamated with the Jhelum Division during the year under report.

Lower Jhelum Canal.

414. The area irrigated was 251,601 acres in *Kharif* and 525,895 acres in *Rabi*, as compared with 231,872 acres and 533,598 acres in the corresponding crops of the preceding year. The *Kharif* season opened unfavourably and showed no improvement throughout, yet the area irrigated exhibited improved results owing to increased cotton and fodder sowings, encouraged by higher prices. The decrease during *Rabi* was mostly due to a shortage of water in October and to the prevalence of a very severe influenza epidemic during the months of October and November 1918. The canal was closed at its head for 14 days during *Kharif* and for 3 days during *Rabi* for special repairs. The demand for water was keen and the supply was generally sufficient throughout the year, except in October 1918.

415. The gross receipts and the working expenses were Rs. 42,77,101 and Rs. 8,60,215, respectively, giving a net revenue of Rs. 34,16,886, or 20·49 per cent. on the capital outlay to the end of the year. This was about 1 per cent. less than that of the preceding year due to —

(*a*) an increase of about Rs. 1,60,000 in the capital outlay ;

(*b*) the decrease in the area irrigated during *Rabi* 1917-18 (the revenue on which was collected during the year), caused partly by a large *barani* area which was sown and matured without receiving canal water and partly by the shortage of labour on account of recruiting activities and the prevalence of exceptionally severe malaria at the time of the *Rabi* sowings.

Upper Sutlej Inundation Canals.

416. The net area assessed (243,597 acres) was less by 93,006 and 89,785 acres, respectively, as compared with the averages of the two triennia ending 1914-15 and 1917-18. This was quite satisfactory taking into consideration the fact that the monsoon of 1918 commenced only in the middle of August and ceased early in September, and that the river ran low much earlier than usual, in consequence of which the *Kharif* and *Rabi* crops which required water during September, suffered severely.

417. The gross income amounted to Rs. 8,40,909 and working expenses to Rs. 3,76,397, giving a net revenue of Rs. 4,64,512 or 25·63 per cent. on the capital invested. In the preceding year the figures of net revenue and the percentage were Rs. 3,67,920 and 20·24. This favourable result was due to the very good *Rabi* crop of 1917-18, the revenue for which was collected during the year.

Sidhnai Canal.

418. The irrigation effected was 121,212 acres in *Kharif* and 108,185 acres in *Rabi*, as compared with 131,207 acres and 187,235 acres in the corresponding crops of the previous year. The percentage of the failed crops was 21·15 in autumn and 9·31 in spring as against 19·97 and 8·29, respectively, in 1917-18. The high percentage of *kharaba* was due to low supply in the river Ravi at the head of the Sidhnai Canal.

419. The total income from all sources amounted to Rs. 8,11,923 and the working expenses to 95,788, giving a net revenue of Rs. 7,16,135, or 53·7 per cent. on the capital outlay against Rs. 5,42,856, or 40·75 per cent. in the preceding year.

420. The outstanding feature of the working of this canal during the year was that the winter supply was very deficient and in consequence wheat could not be sown extensively.

421. The area irrigated was 121,144 acres in *Kharif* and 59,953 acres in *Rabi* as compared with 140,042 and 64,171 acres, respectively, in the preceding year. The decrease was due to short supply and poor soil. The year was one of unusual dryness owing to inadequacy of rainfall and low supply in the river; consequently the canals generally worked badly. **Indus Inundation Canals.**

422. The total income from all sources and the working expenses amounted to Rs. 429,790 and Rs. 2,70,886, respectively, thus yielding a net profit of Rs. 1,58,904 as against Rs. 42,508 in the preceding year and an average of Rs. 72,587 in the previous triennium.

Minor Irrigation Works.

423. The canals were opened in May and closed as early as August owing to low supply in the river. **Shahpur Imperial Canals.**

424. The area irrigated was 16,727 acres as against 42,633 acres in the preceding year and 38,720 acres, the average of the previous triennium. The decrease was due to the lowness of the river.

425. Revenue was remitted on 4,755 acres, including 1,140 acres on account of short supply, and 2,810 acres in consequence of bad germination.

426. The net revenue of Rs. 18,087 brought a return of 8·04 per cent. on Rs. 2,25,021, the capital outlay up to date.

427. The operation of the year resulted in a loss of Rs. 8,514, which is equivalent to 2·24 per cent. on the capital outlay, as compared with a loss of Rs. 12,165, or 3·23 per cent. in the preceding year. The question of the financial position of these canals was referred to the Financial Commissioners, Punjab, in May 1918, who have decided to defer consideration until after the completion of the settlement operations in the Sirsa Tahsil of the Hissar District, which were commenced on 1st October 1919. **Ghaggar Canals.**

428. The gross area irrigated was 189,916 acres as against 365,184 acres in the preceding year and 327,547 acres, the average of the previous triennium. Absence of any rain of appreciable intensity and shortage of water in the canals as a result of a low river, accounted for the deficient irrigation. *Rabi* sowings were also delayed on account of influenza. Certain lands on the Hajiwah Canal were also damaged by locusts during September. The failed area was 44,636 acres, as compared with 63,155 acres during the preceding year. **Lower Sutlej Inundation Canals.**

429. The net revenue amounted to Rs. 1,91,712 against Rs. 4,16,395 in 1917-18.

430. The river Chenab rose sufficiently high early in May, but this rise continued only for a short period and the river then dropped much below its normal level. The supply was poor throughout and the canals had to be run by rotation until September when, as a result of the low river level, operations had to cease. **Chenab Inundation Canals.**

431. Both the irrigated and assessed areas (126,629 acres and 98,123 acres, respectively) were poor this year owing to the early closure of the canals.

432. The net income amounted to Rs. 3,02,111 as against Rs. 3,92,373 in the preceding year.

433. The year was very unfavourable from an irrigation point of view, yet owing to judicious distribution of the available supply, results were better than might have been expected under the adverse conditions which obtained. The area irrigated was 308,563 acres as against 385,075 acres in the preceding year and 386,976 acres, the average of the previous triennium. **Muzaffargarh Inundation Canals.**

PRODUCTION AND DISTRIBUTION.

434. The net revenue amounted to Rs. 2,98,749 against Rs. 3,64,448 in 1917-18.

Shahpur Provincial Canals.

435. The area successfully matured and assessed was only 12,021 acres, as compared with 23,706 acres during the preceding triennium. The decrease was due to unfavourable conditions of the river and the absence of timely rainfall during the year.

436. The revenue was remitted on 119 acres on account of short supply and on 369 acres by reason of bad germination. Besides this 674 acres also received remission under Tenancy Rules.

437. The working operations showed a net profit of Rs. 2,595 explained partly by the curtailment of expenditure on maintenance and repairs and partly by an adjustment of establishment charges proportionately according to works outlay instead of the debit of the fixed amount of Rs. 24,000 per annum.

CHAPTER V.

REVENUE AND FINANCE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Land Revenue.—Report on the Land Revenue Administration of the Punjab for the agricultural year ending 30th September 1918.

Canal Revenue.—Administration Report of the Irrigation Department, Punjab, for the yaar 1918-19.

Excise and Opium.—Report on the Excise Administration of the Punjab for the year 1918-19.

Stamps.—Report on the Administration of the Stamp Department of the Punjab for the year ending 31st March 1919.

Income-tax.—Report on the Income-tax Administration of the Punjab for 1918-19.

Forests.—Progress Report of Forest Administration in the Punjab for 1918-19.

Provincial Revenues.—Audit and Appropriation Report on the Accounts of the Punjab for 1918-19 and Review of the Annual Accounts of the Punjab for the year 1918-19 published in the *Punjab Gazette*, dated $\frac{\text{April 18, 1919}}{\text{October 24, 1919}}$, Supplement Part II.

Local Funds.—Report on the Administration and Accounts of the District Boards in the Punjab for the year 1918-19.

Municipal Revenues.—Report on the working of Municipalities in the Punjab during the year 1918-19

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume I—Commercial Statistics.

Volume II—Financial Statistics.

Volume IV—Administrative and Judicial (including area, population and local funds).

Salt.—Report on the Administration of the Northern India Salt Revenue Department for the official year 1918-19.

36.—Gross Revenue and Expenditure.

438. The following table shows the receipts under the various heads of revenue, excluding revenue from salt, in the year under report :—

(In thousands of rupees).

Major Heads.	Imperial.	Provincial.	Total.	+ more − less on figures for 1917-18.
Land Revenue	1,42,72	1,42,72	2,85,44	− 26,38
Opium	10,05	...	10,05	+ 2,63
Stamps	30,69	30,69	61,38	+ 1,38
Excise	52,59	52,59	1,05,18	+ 19,55
Provincial rates	...	31	31	+ 10
Customs	23	...	23	+ 1
Income tax	21,55	18,77	40,32	+ 4,29
Forests	...	21,54	21,54	+ 36
Registration	...	4,06	4,06	+ 25
Tribute	1,45	...	1,45	+ 1
Interest	3,26	2,37	5,63	+ 64
Law and Justice—Courts of Law ...	...	6,53	6,53	− 28
" " " —Jails	...	6,76	6,76	− 1
Police	...	1,86	1,86	− 41
Education	...	5,33	5,33	+ 8
Medical	...	76	76	+ 31
Sanitation	...	1,62	1,62	+ 35
Agriculture	...	7,00	7,00	+ 3,68
Scientific and Miscellaneous	...	30	30	+ 1
Receipts in aid of Superannuation ...	1,06	67	1,73	− 36
Stationery and Printing	77	92	1,69	+ 2
Miscellaneous	5,17	9,46	14,63	+ 3,87
Irrigation—Major Works	2,06,53	2,06,53	4,13,06	+ 34,83
" —Minor Works	8,22	1,03	9,25	− 2,03
Civil Works	1,05	4,28	5,33	+ 68
Transfers between Imperial and Provincial ...	−46,75	46,75	...	...
Total ...	4,38,59	5,72,85	10,11,44	+ 43,58

439. The gross expenditure, excluding expenditure of the Salt, Military, Railways, Post Office and Telegraph Departments and Capital expenditure on canals, was as follows :—

(In thousands of rupees.)

Major Heads.	Imperial.	Provincial.	Total.	+ more — less on figures for 1917-18.
Refunds	1,16	1,25	2,41	— 3
Assignments	56	34	90	— 3
Land Revenue	...	49,38	49,38	+ 2,79
Stamps	98	98	1,96	+ 10
Excise	1,17	1,17	2,34	— 1
Income-tax	29	29	58	+ 25
Forests	...	17,96	17,96	+ 6,38
Registration	...	1,34	1,34	+ 7
Interest	2,06	1,83	3,89	+ 10
General Administration	4,07	12,27	16,34	— 48
Law and Justice—Courts of Law ...	...	46,21	46,21	+ 1,73
" " " Jails ..	...	23,38	23,38	+ 3,94
Police	...	71,23	71,23	+ 5,01
Education	...	53,03	53,03	+ 8,56
Ecclesiastical	2,76	...	2,76	+ 14
Medical	...	11,60	11,60	+ 2,34
Sanitation	...	8,06	8,06	— 1,75
Political	7,20	...	7,20	+ 1,28
Agriculture	...	16,83	16,83	+ 3,20
Scientific and Miscellaneous ...	...	1,69	1,69	+ 29
Pensions, Territorial and Political ...	70	...	70	+ 1
Superannuation	15	25,91	26,06	+ 18
Stationery and Printing	21	8,44	8,65	+ 1,35
Miscellaneous	73	19,48	20,21	+ 4,42
Famine Relief	50	16	66	+ 71
Irrigation, Major Works	51,52	51,51	1,03,03	— 76,03
" Minor Works	9,37	4,12	13,49	+ 1,92
Civil Works	17,75	70,33	88,08	+ 30,84
Total ...	1,01,18	4,98,79	5,99,97	— 2,73

37.—Land Revenue.

440. The Land Revenue Report gives the figures for land revenue according to the agricultural year which ends on the 30th September. There must consequently always be a difference between the total collections as calculated by the Treasury on the financial year and the yearly returns furnished by the Financial Commissioners' Office.

441. For the year ending 30th September 1918 the following are the figures of collections including those on account of previous years, comments on which have already been made in section 10 dealing with demands :—

	Rs.
Fixed Land Revenue	2,31,34,595
Fluctuating Land Revenue ...	1,44,26,061
Temporarily excluded from fixed Land Revenue Roll	47,596
Other Land Revenue	46,52,891
	4,22,61,143

38.—Irrigation.

442. The total capital invested up to the end of 1918-19 on canals in operation classed as productive major works was Rs. 22,45,11,551. Capital expenditure during the year amounted to Rs. 12,06,387. The income from all sources, excluding refunds, was Rs. 4,13,14,942, while

working expenses totalled Rs. 1,10,14,431 and interest charges came to Rs. 75,68,775. The net profit left was thus Rs. 2,27,31,733 comparing with a sum of Rs. 1,92,15,030 in the previous year.

443. The balance profit on Imperial Canals, Minor Works not classed as productive, was Rs. 8,02,145 as against Rs. 12,36,137 in 1917-18. Provincial canals return a small profit of Rs. 2,595, as compared with Rs. 17,179.

39.—Excise.

444. The issues of Indian-made beer rose 18 per cent. above those in the previous year and the total duty realised increased from Rs. 7,44,741 in 1917-18 to Rs. 8,55,384 in 1918-19 : a betterment of nearly 15 per cent. Nearly $\frac{3}{5}$ths of the total issues were consumed by the troops. **Beer.**

445. The consumption of country spirit (both plain and spiced) amounted to 457,000 proof gallons, being 14 per cent. above that of 1917-18 (398,000 proof gallons). The chief cause of this rise was the increased resort to liquor during the prevalence of the influenza epidemic in the autumn of 1918 as a prophylactic against the disease. Another cause was the recruiting campaign in the Province from April 1918 to the end of September 1918. The rural population obtained higher prices for their agricultural produce and in the towns the working classes secured a higher scale of wages. All these were potent contributory causes which led to greater consumption despite the great enhancement in retail prices. Notwithstanding the increased consumption the convictions for drunkenness were less than usual, namely, 753 against 835 last year. **Country spirit.**

446. There has been a decrease in the consumption of opium (from 57,760 seers to 53,372 seers) by 7 per cent., as compared with 1917-18. The enhancement of the issue price from Rs. 27-8-0 to Rs. 32-8-0 contributed not only towards increasing the revenue under this head, but also towards checking consumption. The issues to vendors were restricted and fixed according to legitimate requirements. The policy of reducing the number of retail shops to the minimum requirements of a district was followed in certain districts and the arrangement is being extended during the current year. The total receipts from opium rose from Rs. 18,32,425 to Rs. 22,20,127, an increase of Rs. 3,87,702, or 21 per cent. on the figures for 1917-18. **Opium.**

447. The consumption of charas declined from 23, 108 seers in 1917-18 to 20,271 seers in 1918-19, and that of Bhang from 95,414 seers to 93,869 seers, as compared with 1917-18. **Hemp Drugs.**

448. The sales of cocaine to the public fell from 7,613 grains to 6,652 grains during the year under report. **Cocaine.**

449. The distilleries in the Punjab had again to contend with the same difficulties as last year in the matter of the supply of distilling bases and coal. There was also a great scarcity of Java solidified molasses, a dearth of gur and of casks. The total issues, however, of country spirit (8,19,516 gallons) exceeded those of the previous year by 36 per cent., including 155,828 gallons issued in bond to Sind. This was entirely due to the great demand brought about by the causes enumerated above. **Distilleries.**

450. The gross income rose from Rs. 85,21,350 in 1917-18 to Rs. 1,04,57,927 in 1918-19. **Receipts.**

40.—Salt Revenue.*

Cis-Indus and Kalabagh Mines.

451. The year's output from the Khewra Mine was the largest up to date and standing at 4,189,859 maunds was over 9 lakhs in excess of the previous year's production. The figures for the Warcha and other mines are not available.

*Note.—The information relating to Salt Revenue is incomplete owing to delay in connection with the report.

452. The price of salt throughout the Salt Range Division remained unchanged at 1 anna and 6 pies per maund. In the year under report there was a net loss of Rs. 46,569, as compared with a net profit of Rs. 82,805 in 1917-18, the deficit being chiefly due to the high cost of coal and labour.

453. The through-traffic receipts for the Division amounted to Rs. 90,969, while the charges totalled Rs. 54,057. The latter, however, do not include the interest on capital expenditure incurred in connection with, and the leave and pensionary charges on account of, the establishment employed on through traffic work.

Mandi Mines.

454. Sales from the Mandi Mines amounted to 131,922 maunds, being 1,879 maunds less than in the previous year. The price of salt at the mines is Re. 0-10-6 per maund and the duty Re. 0-3-9.

Sultanpur Salt Works.

455. Though only one more work was licensed than in 1917-18, the Sultanpur manufacturers more than doubled their output of recent years, the year's total amounting to 58,182 maunds. Clearances similarly rose and the average sale price jumped from Re. 0-8-8 to Re. 1-0-9 per maund.

41.—Stamp Revenue.

456. Receipts under the "Stamp and Court Fees Acts" amounted to Rs. 61,42,960, a sum exceeding the income of the previous year by Rs. 1,36,166. Of the total receipts for the year under review, Rs. 37,67,297 were derived from the sale of court fee stamps, and this sum is Rs. 64,292 less than the figure for the preceding year. Generally speaking, the income was adversely affected by the failure of the *kharif* harvest of 1918, the influenza epidemic, high prices and the absence of a large number of Indian soldiers on active service. The sale of non-judicial stamps, however, realized Rs. 23,02,385, which is Rs 2,12,494 above the last year's return. The greater portion of the income from non-judicial stamps was derived from the vend of non-judicial impressed stamps or sheets, the receipts from which rose from Rs. 16,38, 05 to Rs. 18,50,739. There were large increases in such receipts in six districts, *viz.* :— Lahore, Amritsar, Rawalpindi, Simla, Ambala and Sialkot, the figures in Lahore, Amritsar and Simla denoting the rapidly increasing value of immovable property in urban areas. Decreases were shown by six districts, but in Ferozepore only was the falling off noticeable. It is attributed to a bad harvest and less borrowing of money.

457. The expenditure of the Department rose from Rs. 2,36,859 in 1917-18 to Rs. 2,37,496 in the year under report. The figures for 1918-19 do not, however, include the expenditure in the Gujranwala District, as the figures are not available owing to the destruction of district records in the disturbances of April 1919.

42—Income-tax.

458. The collections during the year including arrears pertaining to previous years amounted to Rs. 36,20,810, a rise of 6 per cent., as compared with realisations in the previous year. Uncollected balances pertaining to 1917-18 and all previous years amount to Rs. 5,031, while the arrears for 1918-19 alone amount to Rs. 15,20,855. These heavy arrears are due partly to the fact that the Income-tax administration was in a state of flux so that assessments were announced very late in the year and partly to the abolition of the old system of the objection procedure. Those who would have under the old system objected to the Deputy Commissioner appealed to the Commissioner with the

result that hundreds of petitions remained pending with Commissioners on the expiry of the year.

459. Four Special Income-tax Officers worked in various parts of the province and assessed urban areas and important trade centres. The assessments made by this special agency secured an increase of Rs. 9 lakhs (Rs. 9,00,000). The assessments were on the whole done with care.

460. Considerable difficulty was experienced by assessing officers on account of the real or assumed inability of assessees to furnish the prescribed returns. The general explanation offered throughout the province for the failure was that the returns were much too complicated and could not be filled up with any degree of accuracy. The question of simplifying the returns is engaging the attention of the Financial Commissioners.

43.—Forest Revenue.

461. The revenue of the forest year ending June 30th, 1919, was Rs. 24·61 lakhs and the expenditure Rs. 18·92 lakhs yielding a cash surplus of 5·69 lakhs. The revenue and expenditure were classified as follows:—

Revenue.	Lakhs.	*Expenditure.*	Lakhs.
I.—Timber and other produce removed from the forests by Government Agency	12·72	A.—Extension, constitution, improvement and exploitation of the forest property ...	13·22
II.—Timber and other produce removed from the forests by consumers or purchasers ...	7·52	B.—Administrative, executive and protective charges ...	5·70
III.—Drift and waif wood and confiscated forest produce ...	0·53		
IV.—Revenue from forests not managed by Government	0·05		18·92
V.—Miscellaneous ...	3·79	Cash surplus ...	5·69
	24·61		24·61

462. The revenue rose 2·84 lakhs and the expenditure 6·50 lakhs. The cash surplus of the year was 23·10 per cent. of the gross revenue, as compared with 42·94 in 1917-18 and 41·04, the average of the past 5 years. Owing to the failure of the monsoon and the consequence shortage of water in the floating streams Bashahr timber to the value of some Rs. 3 lakhs was held up and failed to reach the depôt. The wholesale cancellation of military indents, which followed on the armistice resulted in the department being left with considerable stocks of rosin and firewood; while the Afghan trouble in May necessitated the holding up for possible military requirements of large stocks of timber and firewood in Rawalpindi which would otherwise have been sold. Had it not been for these untoward circumstances the surplus would doubtless have exceeded Rs. 10 lakhs. It appears probable that the set back is only temporary and will be more than recovered in 1919-20.

463. The true results of the year's working are summarized below:—

	Lakhs.
Cash surplus	5·69
Increase in value of timber and other produce ...	9·71
Increase in value of stock	0·82
Increase in outstandings of revenue	0·09
Increase in outstandings against contractors and disbursers	1·07
Capital expenditure less interest	1·70
Total ...	19·68

44.—Provincial Revenue and Expenditure.

464. The Provincial shares of the Revenue raised and expenditure incurred in the Punjab during the last two years, with the opening and closing balances in each year, are shown in the table below :—

(In thousands of rupees.)

—	Actuals, 1917-18.	Actuals, 1918-19.	Difference between actuals, 1916-17 and 1917-18.
Opening balance	1,22,75	1,94,52	+ 71,77
Revenue	5,50,30	5,72,85	+ 22,55
Expenditure	4,78,53	5,36,55	+ 58,02
Closing balance	1,94,52	2,30,82	+ 36,30

465. The important variations between the years 1917-18 and 1918-19 under the different heads of revenue are shown below :—

(In thousands of rupees.)

I.—Land Revenue	—13,19
V.—Excise	+9,77
VIII.—Income-tax	+1,59
XXI-A.—Agriculture	+3,68
XXV.—Miscellaneous	+2,38
XXIX.—Irrigation Major Works—Direct ...	+2,85
„ „ „ Indirect ...	+14,50

466. Under "I.—Land Revenue" the large decrease is due partly to adjustments made with XXIX.—Irrigation, Major Works, Indirect Receipts, and partly to the failure of the monsoon, which caused an almost total failure of the autumn harvest on unirrigated lands. The phenomenal increase under "V.—Excise" indicates in an unmistakable manner the general prosperity of the people, even though a certain portion of the increase must be ascribed to increased consumption of beer by the large British garrison in the Province. The increase under "VIII.—Income-tax" is due partly to the enhanced assessments under the new Act and partly to the special asssessing agency, which was very successful in discovering large incomes hitherto untaxed. It would have been far greater, if unfamiliarity with the procedure laid down by the new Act had not seriously delayed assessments and consequently collections. Although there have been slight increases in the incomes from departmental farms and well-boring operations, the main increase under "XXI-A.—Agriculture" is purely nominal and is due to book transactions concerned with the purchase and sale of pure seed. The increase under "XXV.—Miscellaneous" is the result of the income of the newly-established copying agency and of increased receipts from the sale-proceeds of town sites. The increased direct and indirect receipts under "XXIX.—Irrigation Major Works" are due to the keen demand for canal water owing to the failure of the monsoon and the large areas irrigated, especially on the Lower Chenab and the Lower and Upper Bari Doab Canals, while the indirect portion of the head benefited by the adjustments referred to above.

467. On the expenditure side the chief variations between the figures of 1917-18 and 1918-19 are as follows :—

	(In thousands of rupees.)
3—Land Revenue	+2,79
11—Forest	+6,38
19-A—Law and Justice—Courts of Law ...	+1,73
19-B—Law and Justice—Jails	+3,94
20—Police	+5,02
22—Education	+8,56
24-A—Medical	+2,34
24-B—Sanitation	—1,75
26-A—Agriculture	+3,20
32—Miscellaneous	+4,28
45—Civil Works—Civil	+3,62
„ Public Works ...	+15,44

468. The increase in expenditure under "3—Land Revenue" is due to the increased pay in the form of grain compensation allowance at higher rates and the special war allowance which was necessitated by the increased cost of living and which can be assigned as a contributing cause of the rise in expenditure under all heads. Heavy expenditure was incurred by the Forest Department in meeting the anticipated demands of the Munitions Board for timber and other produce, but unfortunately these orders did not materialise owing to the cessation of hostilities. Construction of necessary accommodation at Jallo and Chichawatni, and the temporary debit for water rate of rakhs leased out to temporary cultivation are also contributing causes of the rise. The temporary increase in the number of Judges of the Chief Court in the shape of a Liquidation and an Inspection Judge caused a rise in the figures under "19-A—Law and Justice—Courts of Law." The high dietary charges and the purchase of large quantities of raw material as a safeguard against the uncertain condition of the market account for the increase under "19-B—Jails." Grain compensation allowance at high rates and war allowance are the chief reason of the increase under the head "Police." The increase under "22—Education" is due to larger grants-in-aid. The figures under "24-A—Medical" show an increase which is chiefly caused by larger expenditure on canal dispensaries. A decrease in the amounts granted for sanitary purposes accounts for the difference in the figures under "24-B—Sanitation." The bulk of the increase in expenditure under "26-A—Agriculture" is in respect of schemes financed from the wheat profits. The inflation in the figures under "32—Miscellaneous" is the result of various factors, chief among which are the sum of one lakh placed at the disposal of the Imperial Relief Fund for the assistance of cheap grain shops, and the cost of the newly-established Copying Agency Department. Larger grants for roads account for the increase under "45—Civil Works—Civil." The rise under "45—Civil Works—Public Works" can be ascribed largely to an all-round increase in prices of material, and also expenditure on road repairs necessitated by the division of traffic from the railways, on the Chenab bridge and on Gazetted Officers' houses.

45.—Local Funds.

469. The gross income of District Boards reached the record figure of Rs. 94,90,888—11½ lakhs above the total of the previous year. Rather over three lakhs of the increase was contributed by the local rate, the balance being mainly the result of Government assistance.

470. Variations in income and expenditure under the more important heads have already been discussed in section 24.

46.—Municipal Funds.

471. The total receipts of municipalities during 1918-19 amounted to Rs. 86,88,853, a slight advance on last year's figure of Rs. 86,47,286, exclusive in both cases of the receipts of Amritsar Municipality, the records of which were destroyed during the disturbances of last April. A satisfactory increase has occurred in realizations under special Acts, to which the largest contribution is made by cattle pounds. The aggregate expenditure, again excluding Amritsar figures, has risen nearly Rs. 10 lakhs to Rs. 70,85,852. Though receipts have remained almost stationary, disbursements are still well within the limits of income. The total of the closing balances was, however, slightly below last year's figure owing to the investment of considerable sums, mainly in the War Loan. A number of large schemes of public improvement are either in hand or under contemplation, and though few, if any, of these can be undertaken by municipalities without the aid of loans or grants from Government it is gratifying to find that committees are beginning not only to realize the need for better conditions, particularly as regards sanitation, but also to take practical steps towards the necessary improvements. The majority of the municipalities now possess substantial sums at credit—as a rule wisely invested at a good rate of interest in the War Loans,—and this money will be available for the financing, in whole or in part, of the various projects which are to be carried out in the near future.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICE.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Census—Report on the census of the Punjab, 1911, by Rai Bahadur Pandit Hari Kishen Kaul, C.I.E.

Births and Deaths—Sanitation. } Report on the Sanitary Administration of the Punjab and Proceedings of Sanitary Board for the year 1918.

Emigration—Census Report as above.

Medical Relief—
- Report of the working of the Charitable Dispensaries in the Punjab for the year 1918.
- Report on the working of the Punjab Lunatic Asylum for the year 1918.

Vaccination—Report on Vaccination in the Punjab for the year 1918-19.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Statistical Abstract for British India, Volume III—Public Health.

47.—Details of Census.

[*Vide* pages 157-67 of the Administration Report for the year 1911-12.]

48.—Births and Deaths.

General.

472. The rough estimated population for the year under report, worked out by adding births and subtracting deaths since the last census, comes to 20,205,141, *i.e.*, 11,114,110 males and 9,091,031 females, the corresponding census figures being 19,337,146 (10,608,101 and 8,729,045). The birth rate calculated on this estimated population is 37·9, *i.e.*, 1·7 *per mille* less than the rate calculated on the census figures. The death rate is 77·5, *i.e.*, 3·5 less than the rate on the census figures. In individual districts the rate calculated on the census figures is in excess except in the districts of Gurgaon, Simla, Rawalpindi and Dera Ghazi Khan, these being districts in which the estimated population shows a reduction as compared with the census figures. In the previous year the only district which showed a reduction in the estimated population was Simla.

473. With the exception of the last 3 months of the year, 1918 was a healthy year. The death rate from cholera was the lowest on record since 1901 when the rate was the same. That from small-pox exceeded the death rate recorded since 1914, but was lower in all other years since 1900 excepting 1910. Plague accounted for more deaths than in the two preceding years, but under all the other heads of mortality, except fevers, under which head deaths from influenza were returned, there was a reduction. Fevers accounted for a rate of 66·56 *per mille*, the highest yet recorded under this head not excepting even the great malaria year of 1908. It is 49·88 in excess of the average for the years 1912—16 and this excess may be taken to represent the death rate from influenza.

Births.

474. The total number of births recorded during the year was 765,468, of which 404,565 were males and 360,903 females, the respective rates being 39·6, 20·9 and 18·7. The total rate shows a reduction of 5·7 compared with last year and 5·6 compared with the average for the previous five years. The birth rate is the lowest on record since 1902, with the exception of 1909. In the 38 principal towns the birth rate amounted to 41·1 *per mille* as against 46·2 last year and 45·3, the average for the previous 5 years.

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475. The highest birth rate was recorded in Karnal District where it was 51·3 and the lowest in the district of Dera Ghazi Khan 19·3. The other districts, with a comparatively high rate, were Rohtak 49·2, Gurdaspur 45·7, Ludhiana 45·5, while those with low rates were Simla 21·2, Muzaffargarh 26·5 and Multan 29·9. The highest rates were recorded in the Ambala, Jullundur and Lahore Divisions where, with four exceptions (Gurgaon, Simla, Kangra and Gujranwala), the rate was higher than the provincial rate. In thed ivisions of Rawalpindi and Multan only one district, Lyallpur, had a birth rate higher than the provincial rate.

Deaths.

476. There were 1,565,560 deaths recorded during the year under review, 797,343 males and 768,217 females, the resulting rates being 81·0, 75·2 and 88·0 *per mille*. The corresponding rates for the previous year were 37·9, 35·7 and 40·6, and the average for the previous 5 years 33·4, 31·5 and 35·7. This high rate, the highest yet recorded in the Punjab, is the result of influenza which is recorded under the head of fevers, the rate for which is 66·6. The rate for the other heads of mortality were "all other causes" 5·7, plague 4·9, respiratory diseases 2·7, dysentery and diarrhœa 0·5, injuries 0·3, small-pox 0·2 and cholera 0·01. With the exception of small-pox, plague and fevers, all these rates are less than those recorded in the previous year, while plague, fevers and respiratory diseases are the only heads under which the death rate in 1918 exceeded the average for the previous 5 years.

477. The death rates in all the districts exceeded those recorded in the previous year and the average for the preceding 5 years. The excess in Gurgaon amounted to 103·4 and 119·3, respectively, Rohtak 95·1 and 95·6, Ludhiana 79·2 and 77·4, Karnal 65·2 and 61·1, Hissar 62·3 and 66·0, Ferozepore 56·3 and 57·4. In all the other districts the excess over the previous year was more than 48·6. The highest rates were recorded in Gurgaon 155·4, Rohtak 126·3, Ludhiana 110·4, Karnal 97·3, Hissar 97·2, Montgomery 88·2, Lahore 88·1, Ferozepore 88·0, and Gujranwala 82·4. The lowest rates were recorded in Simla 45·4, Kangra 52·6 and Hoshiarpur 57·7.

478. August and September were the two months in which the lowest death rates were recorded, namely, 1·74 and 1·93, and they were closely followed by July and June with rates of 2·07 and 2·61. The total death rate in these four months was only 1·38 *per mille* more than the rate recorded in December (6·97). The rates in the first 5 months of the year varies from 2·88 in February to 3·90 in May. The total death rate for the first 9 months of the year amounted to 25·89, *i.e.*, practically double the rate recorded in October (13·92), 8·29 less than the rate in November when it was 34·18 and about half of the total rate recorded in the last quarter of the year, which was 55·07. Influenza was entirely responsible for the abnormal rate in November and the high rates in October and December. The last quarter of the year is usually the unhealthiest period of the year owing to malaria, but in the year under review the deaths attributable to malaria were insignificant compared with those due to influenza, which was general throughout the Province. The death rate in November was the highest yet recorded in any one month not even excluding October 1908, the great malarial year.

479. The highest death rates, as usual, were recorded under the age group "under one year," *viz.*, 248·83 in the case of males and 235·91 in that of females. Next to infants, old people of 60 and upwards suffered most, the rates being 114·64 and 164·73. The age group between 50 and 60 came next with 93·71 and 108·14 and the age group 1–5 with 93·72 and 96·02. In the remaining age groups the rates varied from 79·57, the female rate for the age group 30—40 to 37·13, the male rate for the group 5—10. With the exception of the rates for infants under one year the female rate exceeded the male rate under every other age group. Calculated on the number of births during the year the death rates for infants were 261·19 and 264·36 as against 247·35 and 248·60 in the year preceding.

480. Gujranwala and Attock districts again recorded more deaths under "other classes" than the actual numerical population of this class and on this occasion are supported by Gujrat. Montgomery accounts for more deaths among Indian Christians than the numerical population shown for this class. Very high death rates are recorded under "other classes" in Dera Ghazi Khan. Montgomery, Jhang, Sialkot, Gurgaon, Lyallpur, Multan and Gurdaspur and in the case of Indian Christians in Multan, Gujranwala, Shahpur, Lahore and Sialkot. These abnormal rates have been remarked on previously and suggest that the population for this class is not recorded correctly. The total rate for Muhammadans was 81·32 as against 80·09 for Hindus, while the total rates for Indian Christians and other classes were 100·80 and 107·01. The rate for Hindus is relatively higher than it was last year compared with the rate for Muhammadans.

481. The urban rate was 70·30 and the rural rate 82·03 as against 42·77 and 37·43, respectively, last year and 36·74 and 33·06 the average for the preceding 5 years. The urban rate was in excess of the rural rate under all heads of mortality, except fevers in which, however, the excess in the rural rate was very marked, amounting to 24·64 *per mille*. This is due to influenza which caused a higher mortality relatively in rural areas than in towns. The rates recorded in the three largest towns were Multan 75·77, Amritsar 71·90 and Lahore 62·41. These rates are considerably in excess of the rates recorded in the previous year and the average for the preceding five years. The increase in Multan is due to plague and fevers and in the other two to fevers.

Cholera.

482. The mortality from cholera was the lowest on record since 1902 and amounted to 257, as compared with 1,365 deaths in the previous year, the rate being 0·01 *per mille* as compared with 0·07 in 1917 and 0·30, the average for the previous 5 years The mortality was highest in the Jullundur District, where 56 deaths occurred, Ferozepore coming next with 53. July, August and September were the worst months in respect of cholera during the year under report, the mortality amounting to 77, 57 and 46, respectively. In October the number of deaths fell to 10, while in November and December the province remained altogether free.

483. The usual history of cholera in the province is that it is first imported from other provinces and thereafter the course of events depends upon whether or not it happens to be a "good year" for cholera. In 1918 various foci of infection were established by importation, but as it was not a "good year" for cholera the disease did not spread to any appreciable extent. With few exceptions the imported cases, as usual, were the result of pilgrimages to Hardwar, and as long as that place continues to be the disseminating centre for cholera the Province will always be at the mercy of the factors which operate to make a "good year." The constant menace of Hardwar has already engaged the attention of Government, and the Inspector General of Civil Hospitals, Punjab, was deputed to visit that town with a view to seeing whether some preventive measures could not be suggested. A copy of his report has been forwarded to the Government of the United Provinces.

Small-pox.

484. Deaths from small-pox during the year numbered 3,032 against 1,417 in 1917, giving an annual rate of 0·16 and 0·07 *per mille*, respectively, comparing favourably with the average for the previous five years, which was 0·49. No district escaped the disease and the mortality rate from small-pox was as high as 0·82 per *mille* in the district of Lahore and 0·57 in Amritsar. The number of deaths from this disease among children under one year of age was 725 as against 302 in the previous year, whilst the number for over one and under ten years of age was 1,707 as against 911.

485. General vaccination operations begin on the 1st of November, but owing to the epidemic of influenza, in connection with which the vaccination staff was freely employed, little could be attempted in the way of an intensive campaign of vaccination until the end of that month.

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Plague.

486. There were 95,742 deaths in British districts and 18,734 in Native States, a total of 114,476 during the year under review. This was a severe epidemic after two mild years. One important factor that contributed to this was the large legacy left to this year from the previous year in that no less than 16 districts were infected at the close of the year 1917. The disease was chiefly bubonic in type, though a few septicæmic and pneumonic cases were also noted.

487. The case mortality was 76·7 per cent. in the British districts. The Jullundur, Lahore and Rawalpindi Divisions were the worst infected, the first two alone accounting for 64 per cent. of the total mortality in British districts. In the Multan Division the City of Multan suffered from a very severe epidemic during the first half of the year. The Simla District remained free throughout the year, while the Dera Ghazi Khan and Muzaffargarh Districts may also be considered to have escaped since there were only a few imported cases there. About a dozen districts were still infected at the close of the year with an epidemic of a mild type.

488. As usual the mortality went up month by month during the first 4 months of the year. It began to drop in May, except for the districts of Amritsar, Sialkot, Gujrat, Shahpur, Attock and Jhang, where the figures exceeded those of April. There was a rapid fall in June, and this downward curve was carried on to October after which there was a slight rise. March and April were conspicuously wet months producing very favourable conditions for the breeding of the rat fleas which continued to flourish in the slightly drier month of May.

489. The plague staff during the course of their work continued to impress upon the public the value of simple sanitary measures, especially in the hot weather. A large number of copies of Major Norman White's memorandum on plague prevention were distributed in the districts and the contents explained to the people. Trapping, baiting and smoking measures were carried out throughout the year, but more specially during the hot weather in all late infected villages and in places affected annually or during the previous year, with a view to reduce the number of foci of infection in the next season. Some 2,000 villages and towns were thus treated during the summer, and it is gratifying to note that in only a few of the villages thus treated did plague reappear during the ensuing season. The use of cresol fumigation for the purpose of killing fleas has become popular with the people, and there is no doubt that its timely use combined with ratting has helped to check the spread of the disease in many places, notably Rawalpindi and Multan, while the public appreciate the simplicity of solar disinfection and resort to it willingly. Jhang Municipality was the only body which employed the method of evacuation effectually and thus saved the city from an epidemc. However 48 villages were completely evacuated in the whole province, and about 200 partially.

490. The public are still rather apt to run away in panic from an infected place when the disease has become well established thus carrying the disease to other places. Unfortunately little use is made of the special powers of self-protection against persons from infected places under section 141, Punjab Plague Manual. Rewari Municipality, it is true, made an effort in this direction, but only for about two months when the want of co-operation told its inevitable tale. There is, however, a distinct change for the better in the attitude of the people. They are gradually beginning to understand the causation and spread of plague, and although there are still many who are opposed to plague measures, the majority of these are elderly persons unable at their time of life to imbibe fresh ideas.

Fevers.

491. During the year under report a total of 1,287,027 deaths was registered under the head of "Fevers" against 510,812 in 1917, showing an increase of 776,215 deaths. The increase was almost entirely due to influenza, deaths from which were, according to instructions, returned under the heading of "Fevers" or "Respiratory diseases" according to

circumstances. The mortality from fevers is the highest on record since the introduction of the system of registration of vital statistics in this province in 1867. The death rate was 66·56 against 26·42 in 1917 and a quinquennial mean of 19·12. The number of deaths in November reached a total of 637,959.

492. The highest death rate was recorded in Gurgaon 134·88, Rohtak coming next with 109·07, Karnal 85·40, Hissar 84·66, Montgomery 77·56 and Ferozepore 75·30. The lowest rate was recorded in Simla 28·28.

493. The urban and rural fever death rates were 44·17 and 68·81 as against 21·46 and 26·91 in the previous year. In the three largest towns rates of 40·80, 39·71 and 32·77 were recorded in Amritsar, Lahore and Multan, those for the previous year being 29·95, 25·89 and 30·46 and for the quinquennium 19·56, 21·07 and 19·28. When compared with 1908 Amritsar showed a decrease of 27·36, but the increases in Multan and Lahore amount to 8·97 and 6·02, respectively. In the smaller towns rates as high as 135·52 were recorded at Hodal, 134·61 at Faridabad, 128·62 at Palwal, 124·50 in Firozpur-Jhirka and 111·22 in Bahadurgarh. The mortality from fevers was higher in all the districts of the province than in the previous year.

49.—Emigration and Immigration.

494. The conditions detailed in last year's report continued to obtain during the period under view. Two residents of the Gujranwala District, who succeeded in reaching Siam without passports, were arrested by the Siamese authorities and were eventually tried and convicted under the Defence of India Passport Rules. With a view to discouraging further enterprise of the kind full publicity was given to the facts and result of the case.

50.—Medical Relief.

495. During the year two dispensaries were closed and 13 new ones opened, the total number working at the close of the year being 491. **Dispensaries.**

496. The total number of patients treated during the year was 4,957,555, as compared with 5,440,696 in 1917. The decline is attributable to the non-existence of malaria in epidemic form. In-patients treated aggregated 88,386 as compared with 96,019 and out-patients 4,869,169 against 5,344,677 in 1917. **Patients.**

497. The following abstract exhibits the more important diseases and conditions for which patients attended dispensaries during the year :— **Statistics of Disease.**

Cholera	129
Dysentery	56,916
Enteric Fever	1,956
Rheumatic Fever and Rheumatism	79,012
Small-pox	458
Other tubercular diseases	6,013
Diseases of the Eye	991,237
Diseases of the Ear	336,460
Diseases of the Nose	24,065
Dyspepsia	180,479
Diarrhœa	50,880
All other diseases of the digestive system	518,868
Ulcers	404,568
Other diseases of the skin	486,967
Injuries, general and local	189,589

611,523 persons were treated for malaria at fixed hospitals and dispensaries. There was a marked increase in the figures for "all other

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infective diseases" from 9,360 to 215,284. These include cases of influenza, which prevailed in virulent pandemic form during October and November when whole villages and families were attacked. The figures furnish no index of the magnitude of the epidemic which accounted for at least three-quarters of a million deaths. Pneumonia is responsible for an increase of 5,992 cases, the number being no doubt largely augmented by complications and sequelæ of influenza. 288 more cases of small-pox were recorded than in 1917. Other diseases, such as dysentery, rheumatic fever and rheumatism, anæmia, diseases of the nervous and respiratory system, eye, ear, nose, all show a decline; so that, had it not been for the wave of influenza, the health of the Province would have been unusually good.

Departmental Institutions.

498. The number of cases treated in Police, Canal, Railway and other State-special hospitals and dispensaries was 650,866, as compared with 716,321 the previous year.

Non-aided dispensaries.

499. At the 12 non-aided dispensaries which furnished statistics 84,037 patients were treated and 3,314 operations performed against 90,441 patients and 3,740 operations in 1917.

Surgery.

500. 242,925 operations were performed, compared with 250,691 the previous year. Of this number selected operations totalled 26,031 as against 39,046 in 1917 and include 13,095 extractions of cataractous lens. The districts in which the largest number of selected operations were performed were Ferozepore 9,007, Amritsar 2,744 and Karnal 2,639.

Income and expenditure.

501. The total income of dispensaries of classes I, III and IV was Rs. 17,30,560, as compared with Rs. 16,23,678 in the preceding year. Government contributions amounted to Rs. 1,48,298, Local Fund to Rs. 5,95,270 and Municipal to Rs. 5,72,653; while interests on investments, subscriptions and miscellaneous receipts yielded Rs. 9,641, Rs. 1,08,061 and Rs. 1,52,887, respectively. The total expenditure excluding a sum of Rs. 267 which was invested amounted to Rs. 15,81,866.

Mayo Hospital.

502. All the work comprised in the original King Edward Memorial Scheme was completed during the year.

Female Medical aid and education.

503. Despite strenuous efforts to obtain qualified women for employment in the various women's hospitals, wards and dispensaries in the Punjab, the supply is still far short of the demand, and work has been carried on under the same disabilities and disadvantages as in former years. The provincialization of the Women Sub-Assistant Surgeons Service, which is under the consideration of the Local Government, will, it is hoped, ease the situation to some extent. (a)

504. Classes for the training of *dais* have been carried on, at Bhiwani (Hissar), Lahore, Amritsar, Asrapur (Amritsar District) and Multan, the Victoria Memorial Scholarship Fund assisting the Bhiwani, Lahore and Asrapur classes. All excepting Amritsar and Multan, where work has been temporarily stopped, report satisfactory progress. The supervision of *dais* will henceforth be the concern of local Supervising Committees which are being formed at each district headquarters under the auspices of the Punjab Central Midwives Board.

War hospitals.

505. Until early in August 1918 the number of beds in the war hospitals at Lahore, Amritsar, Jullundur, Karnal, Gurdaspur and Lyallpur was 614 when it was reduced to 274. The patients treated during the year aggregated 1,755 as against 2,089 in 1917. The people of the Province displayed their usual practical interest in the welfare of the patients by contributing generously towards their comforts.

Military Dressers.

506. The training of young men as dressers was discontinued shortly after the cessation of hostilities up to which time 1,267 men had received instruction at a cost of Rs. 56,355. The number actually accepted for service by the Military authorities was 882.

(a) The scheme has since been sanctioned.

507. During 1918 the daily average strength of the Asylum rose to 876·44 or 60 in excess of the total number for whom accommodation is provided. There was therefore a certain amount of overcrowding in the male section. The maximum number of insanes confined on any one day was 904. The number discharged cured was 201, nearly twice as many as in 1917.

508. The Ranchi Central European Asylum having been recently opened, 16 insanes were transferred to it during the year.

509 The Asylum did not escape the influenza epidemic ; largely owing to this disease the daily average of sick rose from 66·75 to 82·74, while the total number of deaths was 130 compared with 103 in the previous year. A satisfactory feature of the year was an appreciable decrease in the admissions to hospital for tubercle.

510. Government has sanctioned the acquisition of an unsightly and insanitary plot of land measuring nearly 50 acres which adjoins the Asylum on the south for the erection of a new block for suspected tubercle cases and possibly in due course for the construction of a separate criminal section, while the remaining area will be levelled and put under cultivation, partly by Asylum labour. Money has also been provided for the remodelling of some of the cubicular barracks, and the provision of a segregation area in connection with the measures for the reduction of the spread of tubercle.

511. The number of permanent Asylum attendants has been increased and an enhancement of the pay of the whole warder establishment sanctioned.

51.—Sanitation.

Sanitary Board.

512. The Sanitary Board met seven times during the year, five times in Lahore and twice in Simla. The balance of Rs. 3,69,494 was fully utilized, and out of an additional grant of one lakh a sum of Rs. 84,111 was spent leaving a balance of Rs. 15,899 which lapsed to Government. A fresh grant of 4 lakhs was placed at the disposal of the Sanitary Board for allotment during 1918-19 and from this grants-in-aid aggregating Rs. 26,601 were made upto 31st December 1918 leaving a balance of Rs. 3,73,399 which will be accounted for in the next year's report.

513. Orders were passed by Government in regard to the maintenance of sanitary works by local bodies while model rules, as proposed by the Sanitary Board in regard to projections and *tharas* over drains in conformity with United Provinces rules, have been framed by Government and are now enforced in respect of all intra-mural drainage schemes.

Drainage Board.

514. A Drainage Board has been constituted by Government to deal with questions of flooded or water-logged areas in the Province thus relieving the Sanitary Board of this additional work.

Village sanitation.

515. The regulations framed by the District Board of Gurgaon for the improvement of village sanitation and sanctioned by Government are being enforced in 10 large villages of each of the six tahsils in that district. But in the Ambala District similar rules have remained a dead letter, while in the Ludhiana District efforts in this direction proved abortive. Similar schemes have been prepared recently by the District Boards of Jullundur and Lyallpur, and it is hoped that the movement will spread.

52.—Vaccination.

516. The cost of the Department amounted to Rs. 1,41,816, being an increase of Rs. 11,225 as compared with the figures for the preceding year.

517. The average cost of each successful vaccination was Re. 0-2-10 as compared with Re. 0-3-0 in the previous year. The decrease in the

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cost per successful vaccination is due to the increase in the number of operations performed during the year.

518. The total number of operations performed by all establishments during the year under report was 994,593, an increase of 190,364. Of the total cases 566,062 were recorded as primary vaccinations and 428,531 as re-vaccinations as compared with 621,650 and 182,579 in 1917-18. The decrease in primary vaccination is generally attributed to the prevalence of influenza whilst the great increase in the number of re-vaccinations is the result of a general vaccination campaign against the epidemic of small-pox which prevailed throughout the season.

519. The percentage of males and females to total number of re-vaccinations was 70·25 in the case of males and 29·74 in that of females as against 65·95 and 34·05 in the preceding year. The percentage of success in primary vaccination was 98·66 as against 98·25 in the previous year while in the case of re-vaccination it was 79·39 as compared with 77·16. This satisfactory result may be attributed partly to the excellent quality of the lymph supplied and partly to the fact that most of the vaccinators have now been trained in the Punjab Vaccine Institute. The percentage of vaccinations in which results were not known to the total number in 1918-19 was 4·53 in the case of primary and 17·82 in that of re-vaccination as compared with 4·80 and 18·71, respectively, in the year preceding.

520. It is satisfactory to record that during the year under report vaccination was performed at dispensaries in 14 districts, the totals being 7,230 primary and 14,243 in re-vaccinations as against 1,280 and 173 in the previous year.

521. One hundred per cent. of the total number of children under one year of age available for operation were successfully vaccinated in the towns in which the Vaccination Act is in force as against 68 per cent. in those towns in which it is not in force, the corresponding rates for the previous year being 85 and 64 per cent. In Lahore, after deducting infantile deaths from births, the number of children available was 5,134, while no fewer than 10,138 were successfully vaccinated. This total no doubt includes children born elsewhere, but resident within the limits of the municipality at the time of vaccination.

Punjab Vaccine Institute.

522. The total number of tubes issued by the Punjab Vaccine Institute was 61,731 as compared with 49,087 in the previous year. Out of the 61,731 tubes issued during 1918-19 results were received in the case of 31,356 tubes showing that 665,452 primary and 347,641 re-vaccinations were performed with an insertion success of 97·68 per cent. in primary and 76·77 per cent. in re-vaccination as against 97·33 and 73·91, respectively, in the previous year.

523. During the war the Punjab Vaccine Institute was the manufacturing depôt for all overseas forces based on India in addition to supplying the Northern Army. Since the commencement of the war the Institute supplied the Army Department with 4 million doses of lymph in addition to meeting all Civil requirements. Owing to the difficulties experienced by the Army Medical Department in storing lymph in Mesopotamia, it was arranged to provide them with the complete staff and equipment of a Vaccine Institute for service in Mesopotamia so that lymph could be manufactured on the spot in accordance with Colonel Forster's system of lymph culture which is exclusively used at the Punjab Vaccine Institute. The offer was accepted and, shortly after the close of the year, the complete staff and equipment of a Vaccine Institute were transferred to the Military Department for service in Mesopotamia.

CHAPTER VII.

INSTRUCTION.

Detailed information on the subjects dealt with in this chapter will be found in the reports and statistical tables noted below :—

PROVINCIAL REPORTS.

Education.—(1) Report on the Progress of Education for the year 1918-19.

(2) Report on the operations of the Department of Agriculture, Punjab, for the year ending 30th June 1919.

(3) Annual Report on the Punjab Veterinary College and the Civil Veterinary Department, Punjab, for the year 1918-19.

Arts and Sciences.—Report on the working of the Lahore Museum for the year 1918-19.

PUBLICATIONS OF THE GOVERNMENT OF INDIA.

Education, Literature and Press.—Statistics of British India, Volume V, Education.

Statistical Abstracts for British India, Volume IV, Administrative, Judicial and Local Self-Government.

53.—General System of Public Instruction.

[*Vide* pages 173-184 of the Administration Report for 1911-12.]

54.—Education.

General Summary.

524. THE year under review has seen a number of important changes introduced into the educational system of this province.

525. The number of public institutions increased by 125, and that of scholars by 11,584. This increase would have been much greater but for the outbreak of influenza which interfered seriously with the programmes of expansion recently initiated. The number of private institutions of little educational value decreased. The expenditure on nearly all classes of schools increased, representing for the most part improvements in teachers' pay.

526. The following measures mark the more important developments during the year :—

(*a*) *Primary Education*—

(*i*) The scheme for the expansion of vernacular education in rural areas was brought into effect in 1918.

(*ii*) The Punjab Primary Education Act of 1919 was passed by the Legislative Council.

(*b*) *Secondary Education*—

(*i*) Regulations for the institution of a Matriculation and School Leaving Certificate Examination were framed by the Punjab University.

(*ii*) A scheme for agricultural teaching in Middle and High Schools was approved by the Local Government and a grant of Rs. 4,69,000 was received from the Government of India to cover initial expenses.

(*iii*) A system of manual training centres for High Schools was instituted.

(*iv*) Rules were framed under the Land Acquisition Act for the purchase of land for schools under private management.

(*v*) Standard provident fund rules for aided schools were drawn up and a system of special grants from provincial revenues sanctioned to encourage the acceptance of the new rules.

(*vi*) The Subordinate Educational Service was divided into two sections, one for English masters and the junior inspecting staff, and the other for classical and vernacular teachers ensuring a more rapid flow of promotion in either section.

(*vii*) The school courses were revised. This measure involved the reduction of the standard Primary school from five to four classes, the postponement of the teaching of English to the 5th class, and the introduction of optional English into vernacular Middle schools. In future no teacher will be entrusted with more than four classes or forty pupils.

(*c*) *Collegiate Education*—

(*i*) Proposals were submitted to the Government of India for the opening of two Government Intermediate Colleges at Multan and Ambala.

(*ii*) Regulations for the establishment of Honours schools were passed by the Punjab University.

(*d*) *Training and inspection*—

(*i*) Sanction to the addition to the staff of the Central Training College of three new posts in the Indian Educational Service and four new posts in the Provincial Educational Service was received from the Secretary of State.

(*ii*) Four new Normal schools for women and one for men were opened.

(*iii*) A training class for teachers of Agriculture was opened at Lyallpur.

(*iv*) An Inspectress of Domestic Science was appointed.

(*e*) *Technical Education*—

(*i*) The scheme for industrial schools was revised.

(*ii*) A Diploma of Commerce was instituted by the University.

Controlling Agencies.

527. An Assistant Director, Mr. J. H. Towle, late Principal of the M. A. O. College, Aligarh, was appointed. Mr. Crosse, Inspector of Schools, Lahore, proceeded on six months' leave in October 1918, preparatory to retirement. He was succeeded by Colonel W. T. Wright of the Jullundur Division, the latter charge being assigned to Sardar Sahib Bhai Bishan Singh. Sardar Sahib Bhai Hari Singh, Inspector of Multan, was promoted to the Indian Educational Service and awarded the title of Sardar Bahadur in recognition of his services. Lala Ratan Lal, Assistant Inspector of Science, was promoted to an Inspectorship. Mr. H. T. Knowlton, Principal, Central Training College, was transferred to Ambala as Inspector, his place being taken by Mr. H. G. Wyatt, Inspector of Rawalpindi, the charge of which was assumed by S. Maqbul Shah. By the retirement of Rai Bahadur Lala Sundar Das Suri, the Department has lost a valuable officer with long experience of inspection and training. The vacant Assistant Inspectorship was filled by the promotion of M. Mohsin Mirza. The Assistant Inspectorship of Schools in Baluchistan was brought on to the Punjab cadre.

528. Miss Stuart Douglas, Inspectress, retired, Miss L. Stuart taking her place, but remaining attached to the Normal School for Women, Lahore. Miss Ahmad Shah was appointed Assistant to the Chief Inspectress, but was to work as Inspectress of Multan on Miss Marshall's transfer to the North-West Frontier Province. In order to make the posts of inspectresses more attractive the salary was raised.

District Boards.

529. The total educational expenditure of District Boards, exclusive of Government contributions, rose from Rs. 12,54,019 to Rs. 13,50,620. Including the recurring imperial grants Government assisted to the extent of Rs. 15,28,836. District Boards generally have responded well to the increased demands on them for education.

Municipalities.

530. Municipalities with the exception of Lahore and Multan, have not devoted much attention to Primary education. The expenditure met from their own resources rose from Rs. 4,07,651 to Rs. 5,40,197.

Collegiate Education.

531. The establishment of a new college at Jullundur under the authorities of the Lahore D. A.-V. College brings the total number of such colleges to 13. The number of students fell from 4,621 to 4,570. Two members of the Government College staff were absent on military duty.

532. The Punjab University instituted a Diploma in Commerce. Several University lectures on special subjects were delivered, including the lectures on Archæology in India by Professor A. Foucher of Paris.

533. A special grant of Rs. 3 lakhs was made to the Khalsa College, Amritsar, in commemoration of the services rendered by the Sikhs in the War. A plot of land has been purchased by the Sanatan Dharm College for playgrounds and hostel extensions. The Guru Nanak Khalsa College, Gujranwala, erected seven rooms of its new building.

Secondary Education (Boys).

534. The number of recognised secondary schools for boys rose from 426 to 454 and the number of scholars from 110,839 to 115,526. The new institutions consisted of 15 Anglo-Vernacular Middle Schools and 13 Vernacular Middle Schools, but 14 existing Anglo-Vernacular Middle Schools were raised to the status of high schools.

535. The total direct expenditure rose from Rs. 29,91,845 to Rs. 32,65,990: of this sum Rs. 14,89,070 was derived from fees and Rs. 4,62,130 from private sources. The number of teachers rose from 6,157 to 6,538. Of these 4,360 are trained as compared with 4,074 in 1917-18.

536. The headmasters of the schools situated in the recently disturbed areas were, with few exceptions, able to maintain school discipline unimpaired during a period of considerable tension. The Co-operative Societies' movement has made rapid progress.

Primary Education (Boys).

537. Inspite of the outbreak of influenza 338 new Board schools were opened, as compared with 114 in the previous year. Multan with 48 new schools headed the list. Owing to the conversion of many aided indigenous schools into Board schools, the number of the former decreased by 157, while 93 unaided indigenous schools were closed. The result is a total of 5,167 schools or 90 more than the number in 1917-18. There was an addition of 12,207 pupils attending Board schools with a decline of about 6,000 in aided schools and of some 3,000 in unaided schools, so that the net gain is 3,441, enrolled in the more efficient Board schools.

538. The number of agriculturists' sons at Primary schools increased. In the Multan and Jullundur divisions, for example, there was an increase of 2,465 and 4,392 respectively; while in the Attock district alone, an agricultural area, there was an increase of 1,334 scholars. The pay of the teachers improved, and now runs from Rs. 15 to Rs. 30 and in some cases to Rs. 35. Total expenditure increased from Rs. 17,01,552 to Rs. 18,89,396.

539. Practical work, *e.g.*, sericulture in sub-montane tracts and wool-spinning, mat-making, charpai weaving, and the like, elsewhere supplemented the ordinary school instruction, while gardening in connection with Nature Study is receiving special attention.

INSTRUCTION.

Training of teachers.

540. The number of men and women under training rose from 1,085 and 323 to 1,180 and 326, respectively. The numbers of pupils in mofussil normal schools for women increased considerably and little difficulty was experienced in obtaining candidates for admission (chiefly Muhammadans). In the Lahore school, however, the numbers declined from 162 to 144 owing to marriage, sickness and other causes.

541. The Central Training College had an average attendance of 266 students, of whom 67 were graduates. The results of the various examinations in which 211 candidates passed out of 220 show that the standard of work is as high as ever. Mr. H. T. Knowlton retired from the Principalship after 22 years' service, and the Punjab has lost in him a great educator. The Government contributes six stipends annually towards the class for training kindergarten mistresses at St. Deny's School, Murree.

Professional Technical and Special education.

542. The number of students in the Medical College rose from 289 to 324 ; while the number attending the Medical School is 379 (including 52 on Field Service). The College suffered a great loss in the death of Lieutenant-Colonel H. G. Melville, Professor of Materia Medica.

543. In the Mayo School of Art a new department was opened for the training of architectural draftsmen under the superintendence of Mr. B. Sullivan, A.R.I., B.A., Consulting Architect to Government. A grant of Rs. 1,50,000 was sanctioned by the Government of India towards the cost of the Carpentry School at Jullundur.

544. A revised course of instruction in the Railway Technical School was mapped out leading to the 3rd year course of the Railway literate apprentice class. In connection with this institution a school for the training of disabled soldiers in oil engine and motor work was opened to which 46 persons were admitted.

Female Education.

545. The number of schools for girls rose by 5 to 1,020. Several of the Primary Schools were raised to the Middle standard and the number of secondary schools for girls is now 70, of which 9 are High Schools. The number of scholars rose by 2,768 to 54,755, the attendance being greatest in the divisions containing large towns. The expenditure remained practically stationary and amounted to Rs. 7,39,681, of which Rs. 3,16,450 was spent on secondary schools.

546. The attendance at the Kinnaird College rose from 24 to 30 (21 in Intermediate and 9 in B.A. Classes).

547. The number of girls, who completed the Middle School, course was 585 against 481 in the previous year. The Punjab Association considerably improved the equipment and the pay of the staff of its schools, but a committee of Indian ladies appointed to visit the schools took no action.

548. A conference on the education of girls was held in February 1919 in Lahore at which a number of important recommendations were made.

549. The new Inspectress of Domestic Science visited a number of secondary schools and gave advice on the teaching of this important subject. From January 15th to April 10th she held daily classes in Domestic Science which were well attended by Indian ladies, teachers and girls.

Education of Europeans.

550. The number of public schools decreased by 1 to 33, the small and unsatisfactory Railway School at Bahawalnagar being closed. The number of scholars increased by 74 to 3,024. The total direct expenditure increased by Rs. 2,202 to Rs. 3,94,770. Special capital grants of Rs. 30,000 to the Ayrcliff School, Simla, and of Rs. 15,000 to St. Deny's Murree, were made last year. The Inspector of European Schools is not wholly satisfied with the trained teachers from St. Bede's. The provident fund rules have been revised and the fund is popular.

551. The results of the departmental examinations were not so satisfactory as usual, owing to the interruption to studies caused by influenza. The results of the Cambridge Local Examinations were very poor. The establishment of a board of moderators proved beneficial, as no complaint

was received as to the nature of the papers. An oral test in Urdu was introduced and conducted by the Reporter on Books who submitted a valuable report on the Urdu teaching. His visits should do much to improve the work in this subject.

552. The Primary School scholarship examination was abolished. In future, Primary scholarships will be awarded by the Inspector, after testing the most promising candidates selected by head teachers. The number of scholarships has been increased.

553. The Lawrence School, Ghora Gali, headed the list in both the High and Middle School examinations and won 12 scholarships. The scale of salaries in this institution was improved in September 1918.

554. A large plot of ground, with two cottages, was purchased for St. Deny's School, Murree, and the Station School, Rawalpindi, was enlarged with the help of a Government grant.

Education of special classes.

555. The staff of the Aitchison College suffered somewhat from changes of personnel, amongst other absentees being Mr. A. A. Ritchie, who joined the Indian Army Reserve of Officers.

556. There was a most satisfactory increase in the number of Muhammadans in schools, especially in the Rawalpindi and Multan Divisions. Several Inspectors comment on the difficulties Islamia Schools experience with regard to managing committees. The Anjuman Taraqqi-i-Islam, Amritsar, is providing scholarships for poor Muhammadans.

557. Out of 157,372 non-Brahman Hindus under instruction there were 1,463 Jains. Their number has decreased by 487 since last year.

558. There was a falling off in the number of boys attending low caste schools, mainly due to the ravages of influenza. The Jullundur Inspector, on the other hand, reports an increasing number of low caste children in ordinary village schools. The attendance at low caste schools is not confined to low caste children. Of the 23 low caste schools in the Lahore Division, 14 are maintained by Christian Missions and 5 by the Arya Samaj.

Text Book Committee.

559. The number of books submitted for the consideration of the committee further declined from 384 to 280. This decrease was due to the high cost of printing and publishing during the War. The Urdu readers were revised and various new publications were completed for the press. The term of contract with the Committee's printers having lapsed at the close of the year, tenders for a new contract for five years were invited. It was decided to accept the tender of the old contractors which was for Rs. 1,30,000, an improvement of Rs. 30,000 on the terms of the previous contract. Only eleven books were received for consideration in connection with the award of prizes but, under the revised rules, none of these was considered worthy of a prize. Three of the seven committees appointed last year to standardise technical terms completed their task.

55.—Literature and the Press.

LITERATURE.

560. The slight decrease in the number of books is more than made up by an appreciable increase in periodicals. The number of Punjabi publications exceeds that of the publications in any of the other languages. Poetry and Religion continue to be the largest contributors, but Politics show a marked increase, while Art, Philosophy, Science and Voyages and Travels cut a poor figure. Almost all the works under 'Fiction' have a didactic aim. The 'Bagh-i-alam,' an Urdu translation of the 'World in pictures' is a beautifully illustrated manual published by the Punjab Text Book Committee and supplied free to the libraries of all Vernacular Middle Schools. Some improvement in the quality of 'Religious publications' is noticeable, the tone of even controversial publications being less offensive than before.

561. On the whole, the literature of the year compares rather favourably with that of the previous year.

PRESS.

Newspapers.

562. The total number of newspapers and periodicals of all kinds published in the Punjab during the whole or part of the year under report was 264, as contrasted with 268 in 1917. Of these 264 newspapers, 176 were in Urdu, 55 in English, 21 in Gurmukhi, 9 in Hindi and 3 bi-lingual. The number of daily newspapers was 15, weekly 76 and monthly 147. The remainder appeared at irregular intervals. Of the 15 daily newspapers, 5 were in English, one in Hindi, and the remaining 9 in Urdu, of which 4 represented the Hindus and the same number the Muhammadan community, the ninth being a war publication.

563. One hundred and fifty-six newspapers and periodicals were published in Lahore and 43 in Amritsar, these figures being identical with those for 1917. Other centres of journalistic activity were the Gurdaspur District (10), Simla (9), Ferozepore (8), Sialkot and Rawalpindi (5 each) and Gujrat and Gujranwala (4 each).

Circulation.

564. The combined circulation of the whole Punjab press is estimated at 320,000 copies, as compared with 246,000 and 270,000 in 1917 and 1916, respectively. The following were the more important newspapers in the province:—

English.

1. *Civil and Military Gazette* (European, daily).
2. *Tribune* (Hindu, daily).
3. *Panjabee** (Hindu, daily).
4. *Bulletin** (Hindu, daily).
5. *Khalsa Advocate* (Sikh, weekly).
6. *Observer** (Muhammadan, bi-weekly).

Vernacular.

(a) **Urdu.**

7. *Hindustan** (Hindu, weekly).
8. *Himala* (Hindu, weekly).
9. *Paisa Akhbar* (Muhammadan, weekly).
10. *Loyal Gazette* (Sikh, weekly).
11. *Parkash* (Arya, weekly).
12. *Arya Gazette* (Arya, weekly).
13. *Vakil* (Muhammadan, bi-weekly).
14. *Al-Munir* (Muhammadan, weekly).
15. *Sitara-i-Subah** (Muhammadan, daily).
16. *Rajput Gazette* (Hindu, weekly).
17. *Akhbar-i-'Am* (Hindu, weekly).
18. *Urdu Bulletin** (Hindu, daily).
19. *Khalsa Akhbar* (Sikh, weekly).
20. *Sanatan Dharm Parcharak* (Hindu, weekly).
21. *Ahl-i-Hadis* (Muhammadan, weekly).
22. *Desh* (Hindu, daily).
23. *Paisa Akhbar* (Muhammadan, daily).
24. *Public* (Hindu, daily).
25. *Al-Fazal* (Ahmadia, bi-weekly).

* Has since stopped publication.

26. *Kashmiri Magazine* (Muhammadan, weekly).

27. *Watan* (Muhammadan, weekly).

28. *Leader* (Hindu, daily).

29. *Aftab* (Muhammadan, daily).

30. *Jat Gazette* (Hindu, weekly).

(*b*) **Gurmukhi.**

31. *Khalsa Samachar* (Sikh, weekly).

32. *Panth Sewak* (Sikh, weekly).

33. *Punjab Darpan* (Sikh, weekly).

Of these, the circulation of Nos. 2, 7—9 was claimed to be above 4,000; of No. 1, 4,000; of No. 31 above 3,000; of Nos. 10—12 above 2,500; of No. 22 above 2,000; of Nos. 17, 28 and 32, 2,000; of Nos. 13 and 24 between 1,500 and 2,000; of Nos. 14, 15, 18, 19 and 21 above 1,000; of No. 4, 1,000; and of the rest between 500 and 1,000.

Executive action.

565. The total number of declarations filed under section 4 of Act XXV of 1867 during the year was 25, and under section 5, 242. Security was demanded on twelve occasions by District Magistrates. These demands were made either on original declaration, or on re-declaration, or by varying a previous order. No demand was made by the local Government in the year under report.

566. Action under the Defence of India (Consolidation) Rules, 1915, was confined to the imposition of a censorship order on the *Observer* and the issue of exclusion orders against two Madras and three Calcutta newspapers. The editor of the *Punjab* newspaper was required to abstain from journalism during the course of the war. As, however, he gave the required undertaking the order was never formally served on him.

567. Formal warnings were administered through District Magistrates to newspapers and periodicals as follows :—

(*a*) Seven for publishing articles open to exception on political grounds.

(*b*) Eight for writings calculated to arouse sectarian feeling or religious animosity.

(*c*) Two for publishing matter of an alarmist character.

(*d*) Five for unjustifiable attacks on Government servants and Indian Chiefs.

(*e*) Three unclassified.

Six publications were proscribed under section 12 of the Indian Press Act (I of 1910).

Three prosecutions were instituted under section 3 of Act XXV of 1867, while fifteen warnings were given under this section.

56.—Literary Societies.

[*Vide* pages 196 and 197 of the Administration Report for the year 1911-12.]

57.—Art and Sciences.

Lahore Museum.

Exhibition.

568. In connection with the visit of the Industrial Commission an Art and Craft Exhibition of the Mayo School of Arts and all its affiliated Industrial Schools was held in the new gallery. The result was a fairly representative exhibition showing the qualities and limitations of each school. About a dozen schools contributed furniture, metal works and drawings, while the parent institution exhibited a large collection of all kinds of craft work including silver work, cotton

printing, lithography, process work and Indian Paintings, thus giving the staff and the students of the various schools an opportunity of studying work of a higher standard of design and finish. The exhibition remained open for about a month during which time it was visited by some hundreds of Europeans and Indians, and nearly every saleable article was purchased.

Buildings.

569. The Museum compound has been re-aligned to suit the scheme for widening this part of the Mall. When the scheme, which includes the erection of gates and a balustrated wall, is completed the appearance of the Museum will be greatly enhanced. The Zamzama gun has been allotted a much better position on a central platform commanding this portion of the Mall, and it can now be seen to the best advantage.

Visitors.

570. The total number of visitors during the year 1918-19 was 512,395 with the daily average of 1,463 as against 361,563 and 1,021, respectively, in the previous year. The increased popularity of the Museum, in spite of the effects of war, and influenza, is encouraging. 9,300 women, as compared with 8,540 in the previous year, visited the Museum during the 12 Zanana days.

Educational work of the Museum.

571. The usual course of lectures was delivered during the cold weather, the average attendance being 164 as against 235 in the previous year. Lantern slides on many new educational subjects were made and loaned to lecturers throughout the province, the North-West Frontier Province, Delhi and Mesopotamia. The demand for these is very great.

Acquisitions.

572. Apart from coins and the Treasure Trove usually presented by the various Governments, few articles have been acquired. Nine Greek didrachms were purchased by the Museum through Mr. R. B. Whitehead, I.C.S. Four pieces of Nepalese jewellery inlaid with precious stones, such as are worn by Nepalese priests, were also added to the jewellery section and a series of paintings from Basoli to the Painting Section of the Museum. These paintings are of considerable interest showing as they do that the Basoli School is of Pre-Mughal origin.

Loan Collection.

573. The entire collection of East African Native arms, implements and curiosities found at Dare-es-Salam by the British Troops and loaned to the Museum by Major-General R. H. Ewart has, with the exception of the embroidered banner, been transferred to the Imperial War Memorial Museum at Delhi.

Finance.

574. The expenditure amounted to Rs. 11,571, as compared with Rs. 9,897 in the year 1917-18.

CHAPTER VIII.

ARCHÆOLOGY.

Detailed information on the subject of this chapter will be found in the annual progress reports of the Superintendent, Hindu and Buddhist Monuments, Northern Circle, Lahore, and of the Superintendent, Muhammadan and British Monuments, Northern Circle, Agra, for the year ending 31st March 1919, and in the Administration Report of the Buildings and Roads Branch, Public Works Department, Punjab, for the year 1918-19.

58.—Archæology.

Hindu and Buddhist Monuments.

575 During the year 1918-19, Rs. 3,290 were expended on special works of conservation on the Hindu and Buddhist Monuments in the Punjab and Rs. 1,201 on annual repairs. The special works executed were those carried out on the temple and its gateway at Malot, on the Buddhist *stupa* at Katas in the Salt Range and on the temples of Masrur and Baijnath in the Kangra District. For the work at Malot an estimate amounting to Rs. 3,927 was framed in accordance with the recommendations of the Superintendent, Hindu and Buddhist Monuments, and sanctioned. During the year under review a sum of Rs. 1,000 was allotted for the purpose and completely expended. The measures carried out consisted of the filling up of the large hole in the roof of the sanctum, repairs to the crowning *chhatri*, and the underpinning of the decayed masonry in the north wall of the gateway.

576. The ruined structure situated in a field to the east of the Satghara temples at Katas was identified in 1889 A. D. by Dr. (now Sir) Aurel Stein as the *stupa* built by Asoka at Singhapura. Now though the identification of Katas with the Singhapura of the Chinese pilgrim Hiuen Tsang appeared to leave no room for doubt, the *stupa* referred to was evidently built in a much later architectural style, though the question could not be definitely decided without some excavations. Tentative excavations were accordingly carried out at a small cost and they revealed the existence, inside the outer edifice, of an earlier structure, also a *stupa*, whose age was definitely determined by pilasters and capitals in Gandhara style. A shaft was sunk into the centre of the structure down to virgin soil, but did not yield any relics of value. But though it is now obvious that this *stupa* cannot be identical with the Asoka *stupa*, it is one of the most ancient visible monuments of the Punjab and will deserve preservation.

577. The temples at Masrur have now been completely conserved and the only work that was carried out during the year under report was the cleaning of the temples with Suzerelney stone liquid, and the underpinning of certain masonry. Similar measures were also carried out at the temples of Baijnath.

578. No excavations were carried out in the Punjab during the year under review, with the exception of the little experimental digging at Katas, referred to above. There are numerous ancient city sites and other mounds in the province which await exploration. Proposals for the protection and acquisition of certain mounds at Harapa in the Montgomery District have been submitted to Government and the excavations at these mounds will, it is hoped, yield important and valuable relics. The tours of the Superintendent brought to light several new well-preserved sculptures, and a large number of unpublished inscriptions were copied of which the Sanskrit inscriptions in the great Minar at old Delhi and those deposited in the Central Museum at Lahore deserve special mention. Summaries of the contents of the more important inscriptions have been incorporated in the Annual Report of the Northern Circle for the year 1918-19 and they will be separately described in the Epigraphia Indica.

Muhammadan and British Monuments.

579. Rs. 26,131 were expended on the conservation of Muhammadan and British Monuments in the Punjab during the year ending March 31st, 1919. Of this amount Rs. 17,883 were devoted to "Maintenance" and "Annual Repairs" and the residue to "Special

Repairs" (non-recurring charges). The monuments principally concerned were those at Lahore where, in addition to an expenditure of Rs. 13,088 on maintenance, special repairs were carried out at the Shalamar Garden. Missing stone brackets to support an upper balcony were replaced in the north-east corner pavilion on the first terrace, and the incongruous modern piers which previously served this purpose dismantled. A dilapidated dome was also repaired.

580. The little Sikh pavilion on the same terrace was re-roofed, and the decaying portion of its panelled ceiling renewed. A new wooden gate was provided to the east gateway of the 3rd (lowest) terrace to replace the modern brick filling and the dilapidated stairway adjoining was repaired. A large well and the tanks adjacent to it to the west of the first terrace, which feed the fountains in the garden, were also repaired, together with the ruined walls in the vicinity. A small sum was spent in making good incidental damage caused to the brick paving through the felling of trees on the central terrace about the main tank in connection with the laying out of a rose garden, and necessary repairs to the water-pumping plant were carried out. Repairs to the pumping installation at Hazuri Bagh were also undertaken.

581. At the Akbari Sarai at Shahdara the more urgent conservation work necessary to the range of little chambers around the Serai enclosure was completed and the inappropriate cinder track in front of them taken up and replaced with grass. The land and enclosure walls of Asaf Khan's Tomb adjacent were acquired at a cost of Rs. 12,500, and it is hoped that the urgently needed repair of this monument will soon be taken in hand.

582. A commemorative monument in the form of a low obelisk with an inscription designed by the Consulting Architect to the Punjab Government is being erected to mark the site of Buddhu-ka-Awa, a mound formed of the remains of one of the large brick kilns erected for the supply of bricks required in the building of Shahjahan's City of Lahore and on which later was situated the now demolished residence of the Sikh Ranjit Singh's Italian General Avitabile.

583. At Sheikhupura (Gujranwala District), some 20 miles from Lahore, the great Tank and Haran Munara erected by the Emperor Jahangir received further attention, and over Rs. 3,000 were spent on dressing and making up the ground in the immediate vicinity, and in clearing the terraced sides of the tank from accumulated silt. Missing steps at the bottom of the Minar have been rebuilt to connect with the interior flight up to the top, and the undermined portions of the ruined plinth underpinned. Remaining fragments of plaster have been secured in position with a fillet of cement around the edges. The concrete floors of the several baradaries in and about the tank have also been repaired, as well as dilapidated portions of the tank platform. The undermined brick sides of the old inlet channel and subsidiary settling tank have been secured, and the deep open-jointing filled with mortar.

584. Small repairs of the adjacent Tombs of Sheikh Chilli and his mother, and of the Pathar Masjid at Thanesar were undertaken. In the case of the first monument the work consisted of pointing open-jointing in the marble walls and dome, removing oil stains and scribbling from the walls, and clearing the thickly growing jungle from the enclosure. The lower brick walls of the second tomb were underpinned and the spalled marble masonry above them secured, while at the Pathar Masjid the work comprised the removal of certain mounds of earth which abutted against the building.

585. Special repairs to the old Jahangiri Kos Minars in the Rohtak District along the Grand Trunk Road between miles 16 and 38 commenced in the previous year were carried to completion. The Kos Minars at Ambala and at Jullundur were also repaired. The tomb of Mr. Berkley, Extra Assistant Commissioner, who was killed in a minor engagement with the rebels in 1857 near Kure Shah, was removed to the Church grounds at Montgomery. At Hissar the underpinning of one of the large piers buttressing the rear facade of the Gujari Mahal, which had subsided, was successfully carried out.

CHAPTER IX.

MISCELLANEOUS.

59.—Ecclesiastical Jurisdiction.

(For this section reference should be made to pages 201-207 of the report for 1911-12.)

60.—Ecclesiastical.

586. With the concurrence of the Government of India the Bishop of Lahore, accompanied by his Domestic Chaplain, visited Mesopotamia on episcopal duty with Force D. Canon Wheeler, Chaplain of Simla, and officiating Archdeacon of Lahore, was appointed Bishop's Commissary in charge of the Diocese during the period of absence.

587. Canon K. G. Foster and the Revd. W. O'Conor both died during the year. The former joined the service in December 1900 and the latter in May 1907.

588. Canon H. T. Wheeler was confirmed in the appointment of Archdeacon of Lahore with effect from 25th January 1919 in succession to the Ven'ble J. G. S. Syme.

61.—Stationery.

589. The total value of stationery supplied during the year under report was Rs. 3,90,552 against an allotment of Rs. 4,14,646, showing a net saving of Rs. 24,094. The expenditure was distributed as follows :—

	Rs.
Offices other than Presses	95,339
Presses	2,95,213
Total ...	3,90,552

590. As compared with the preceding year there was an increase of Rs. 57,960, or a little over 17 per cent., which can be ascribed partly to the rise in prices and partly to the unforeseen requirements of the newly-formed Copying Department.

62.—Punjab Government Press.

591. Receipts from the sale of "Gazette," "Civil List" and other Government publications showed a slight increase in comparison with the previous year, but receipts from other sources fell off to the extent of about Rs. 3,500. General expenditure, exclusive of the cost of printing paper and binding materials, increased by over Rs. 30,000, the excess being chiefly due to the purchase of two type-setting machines. The expenditure on contract printing was slightly above the figure of the previous year.

592. From the commencement of the financial year an increase of 10 per cent. on piece work rates was granted to compositors. A more favourable rate was also sanctioned for type distributors in the Press.

593. Prices of paper and binding materials reached the highest point on record and economy in the use of these materials was strictly enforced. The use of Jail-made paper was continued for the manufacture of official envelopes, but the quality of this paper has not so far shown much improvement.

594. Shortage of labour, especially in the low-paid appointments, occasionally proved rather a serious handicap and involved more overtime than would have been necessary under ordinary circumstances. During the influenza epidemic the outturn of work was also seriously affected owing to the large number of absentees. Notwithstanding these disadvantages the value of the outturn of work for the year showed an increase of almost Rs. 3,000 as compared with the previous year.

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